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ABSTRACT

The Interdisciplinary Teamed Instruction (ITI) Project was a 2-year project aimed at determining the effects of ITI on teaching and learning and at validating the effectiveness of a professional development model to facilitate development, implementation, and evaluation of ITI. Through summer institutes and onsite workshops, project staff provided training, resources, and ongoing technical assistance to teacher/administrator teams from four rural Virginia secondary schools. Teams designed and tested integrated curricula that incorporated learning activities and alternative assessment forms; conducted collaborative action research to determine the effectiveness of units; and redesigned units using feedback from students, teachers, parents, and supervisors. Researchers evaluated the 1996 ITI Summer Institute. Evaluation included questionnaires on teacher empowerment, schools as learning communities, school effectiveness, and teachers' sense of control; observations; participant interviews, reflection, and feedback; oral evaluation feedback; and rating of participants' videotaped presentations. Results indicated that the Institute met its intended outcomes. The greatest impact on participants related to collaboration, cooperative learning, assessment rubrics, multiple intelligences, and team building. Participants were very positive in evaluating the Institute, which strengthened their belief in and commitment to ITI concepts and practices. The quantitative instrumentation utilized may not have fully captured and documented Institute effects. Appendices contain a meeting agenda; three questionnaires on teachers, school as community, school products and services; a control questionnaire; a feedback form; interview questions; a team reflection log; presentation scoring rubric; and an evaluation standards checklist. (Contains 20 references.) (SM)

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Kimberly S. Cowley

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## EXECUTIVE SUMMARY

The Interdisciplinary Teamed Instruction (ITI) project was a 2-year (1992-1994) research and development project aimed at determining the effects of interdisciplinary teamed instruction on teaching and learning. The study also sought to validate the effectiveness of a professional development model that would facilitate development, implementation, and evaluation of ITI. Through summer institutes and on-site workshops, project staff provided training, resources, and ongoing technical assistance to teams of teachers and administrators from four rural Virginia secondary schools. These teams designed and tested integrated curricula that incorporated learning activities and alternative forms of assessment; engaged in collaborative action research to determine the effectiveness of units; and redesigned units using data-based feedback from students, teachers, parents, and supervisors (Burns, 1994). Following the initial ITI development, Rebecca Burns, the ITI project director, wrote *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools* (1995). This book, with the *Facilitator's Guide,* is a professional development tool designed to increase a faculty's understanding of curriculum integration and to assist them with decision making about ITI implementation.

To assist schools that were ready to design and implement ITI, three summer institutes were held between June 1995 and August 1996 to help teams of teachers and administrators from 14 schools (representing five states) build capacity for collaboration and interdisciplinary teamed instruction. Two of the institutes were held in 1995: The first was intended to field test the ITI concept outside the parameters of a research and development project, and included six schools from three states. The second was a contracted activity conducted for one school in West Virginia. The third institute, held at Radford University in Virginia from July 7-12, 1996, is the basis for this report. The purpose of the Institute was to help participants design integrated units, plan learning activities and assessments, and present their units as a culminating activity at the close of the training. Thirty participants from four states attended this Institute.

The major purpose of this effort was to conduct a comprehensive evaluation of the 1996 ITI Summer Institute. This evaluation focused on the processes, outcomes, and products of the Institute. Key evaluation activities included administering questionnaires on teacher empowerment, schools as communities of learners, school effectiveness, and teachers' sense of control; on-site observations; face-to-face interviews with participants; reflective assignments for participants; participant feedback forms; oral evaluation feedback provided during the Institute; and review and rating of participants' videotaped presentations.

The major objectives of this evaluation included the following: to measure participants' sense of personal locus of control; to evaluate the processes of the ITI Institute via participants' reflective assignments, feedback forms, personal interviews, and observations of activities; to evaluate participants' culminating activity of videotaped presentations, completed in teams; to assess the outcomes of the ITI Institute on participants' sense of teacher empowerment and professional learning community; and to assess the outcomes of the ITI Institute on participants' perceptions of their organization's effectiveness.

Databases were created using SPSS Windows for each of the quantitative instruments. After cleaning and verification, appropriate analyses were conducted, including internal consistency reliabilities, descriptive statistics, matched pair *t*-tests, and effect sizes. Qualitative

data were categorized and summarized, and reported accordingly. The videotaped presentations were reviewed and rated using a scoring rubric provided by Institute staff.

**Conclusions.** The conclusions are presented by type of data collection, followed by overall conclusions.

*Teacher Questionnaire.* We conclude that the 1996 ITI Summer Institute had some effect on the Self-Efficacy, Decision Making, Impact, and Autonomy in Scheduling subscales after a period of 1 year. For the Total Scale, the Institute had some effect, and this effect was almost moderate after 1 year. The Institute had little effect on the Status and Professional Growth subscales after 1 year.

*School as Community Questionnaire.* We conclude that the 1996 ITI Summer Institute had moderate effect on the Collaborative Activity subscale and some effect on the Total Score by the end of the Institute. The Institute had some effect on the Collaborative Activity and Collective Focus on Student Learning subscales after a period of 1 year. The Institute had little effect on the Shared Sense of Purpose and Reflective Dialogue subscales and the Total Score after 1 year. The Institute had no effect on the Deprivatized Practice subscale after 1 year.

*School Products and Services Questionnaire.* We conclude that the 1996 ITI Summer Institute had little effect on the Total Score after a period of 1 year.

*Control Questionnaire.* We conclude that the 1996 ITI Summer Institute teachers scored higher on the Self-Confidence subscale in comparison to the Autonomous Behavior subscale. And, when the subscales were combined, the teachers scored moderately high on the Total Score.

*Feedback Form.* We conclude that participants felt the 1996 ITI Summer Institute greatly met its intended outcomes. They found the Institute to be well planned, informative, motivational/inspirational, and worth the time and money invested. The most meaningful Institute activities for participants were team building, assessment rubrics, and multiple intelligences; major strengths were team building, information provided, and the organization/ implementation. The Institute positively changed participants' thinking, resulting in increased belief in and reinforcement of ITI principles, and heightened awareness of its potential uses. Furthermore, participants were eager to incorporate their new knowledge back in their respective schools via rubrics, multiple intelligences, cooperative learning, and team building.

*Role Alike Caucus Activity.* We conclude that participants of the 1996 ITI Summer Institute felt the most promising new approaches to teaching and learning included technology and learning styles and strategies. These styles and strategies included higher-level thinking, questioning techniques, group learning, cooperative learning, and hands-on learning. We also conclude that collaborating to design interdisciplinary studies brings about opportunities to those involved including collaboration, networking, and sharing new resources and ideas with others. And, conversely, this collaboration invokes challenges such as time restrictions, scheduling problems, and persuading others to become risk takers.

*Interviews.* We conclude that most participants of the 1996 ITI Summer Institute felt a great deal of freedom in deciding what and how curriculum is taught in their respective schools. Also, that participants advocated using strategies such as critical thinking and analysis skills,

and projects, cooperative learning, and computer training to help students become independent learners. The majority of Institute participants described student learning in their respective schools as positive or average, with individual achievement levels differing by student. Most teams felt that their level of collaboration was good, if not excellent. About half of the participants felt their respective school faculties were ready and willing to implement school change. Another fourth felt that about half their faculties were ready at this point, but the remaining fourth felt implementation would be difficult at the present time.

*Team Reflection Logs.* We conclude that, as the 1996 ITI Summer Institute progressed, participants moved from learning and gathering information to clarifying roles and collaborating to designing activities to reviewing and revising and, finally, to integrating the unit. As a result, their emotions ranged widely from curiosity, apprehension, and anticipation at the beginning to enthusiasm and understanding midway through to exhausted, relieved, and productive at the conclusion. The Institute served as a positive modeling experience for participants, and they felt a sense of accomplishment upon mastering assessment rubrics. Further, participants felt the most beneficial Institute activities were multiple intelligences, rubrics, the mousetrap, and jigsaw.

*Overall Conclusions.* We conclude, from the triangulation of the data garnered from the mixed-method approach, that the 1996 ITI Summer Institute had the greatest impact on participants in the following areas: collaboration, cooperative learning, assessment rubrics, multiple intelligences, and team building. Participants were overwhelmingly positive in their valuation of the Institute, which strengthened their belief in and commitment to ITI concepts and practices. Finally, after reviewing the outcomes of this comprehensive evaluation, we conclude that the quantitative instrumentation utilized may not have fully captured and documented institute effects.

**Recommendations.** A number of recommendations were offered, and are listed below. We recommend that the program continue offering ITI summer institutes to interested educators. Suggested improvements for future institutes might include more explanatory content, more time for individual activities, and slight scheduling adjustments. Also, we recommend that the program continue supporting curriculum integration efforts by keeping in touch with participants and providing new resources when available. One approach for this communication and information provision that is already being implemented by ITI staff is the use of their electronic ITI listserv, which connects interested educators from around the world.

We recommend that the program continue evaluating such institutes, with both qualitative and quantitative methods. We do not feel the need, however, for such an intensive, comprehensive evaluation effort as that presented in this report. The extensive evaluative methodology did not seem to be efficacious, in that the amount of information gained did not seem to be worth the prodigious amount of time spent gathering and analyzing data. Further, the utility of the three quantitative instruments used in this evaluation is questionable, since these surveys did not specifically assess the concepts and constructs undergirding the ITI activities and philosophies. We recommend that staff locate and secure other relevant instrumentation for future endeavors. And, staff might even consider alternate ways of focusing evaluative efforts to better document ITI's ultimate impact on student outcomes. Staff might want to investigate in depth why some schools succeed in their ITI endeavors and report continuing implementation, whereas others apparently do not demonstrate similar success. One such approach might be site visits at selected ITI schools whose faculty have participated in previous summer institutes.

# INTRODUCTION

## Interdisciplinary Teamed Instruction Background

The Interdisciplinary Teamed Instruction (ITI) project was a 2-year (1992-1994) research and development project aimed at determining the effects of interdisciplinary teamed instruction on teaching and learning. The study also sought to validate the effectiveness of a professional-development model that would facilitate development, implementation, and evaluation of ITI. Through summer institutes and on-site workshops, project staff provided training, resources, and ongoing technical assistance to teams of teachers and administrators from four rural Virginia secondary schools. These teams designed and tested integrated curricula that incorporated learning activities and alternative forms of assessment; engaged in collaborative action research to determine the effectiveness of units; and redesigned units using data-based feedback from students, teachers, parents, and supervisors (Burns, 1994).

Program participants reported positive effects of ITI on teaching at the four sites, particularly in terms of professional growth, reflective practice, and collegial interaction. They also reported positive effects of ITI on student attitudes and performance, particularly for lower-achieving students; rated the project's professional development model of summer institutes, on-site workshops, and action research as highly effective; and described conditions that enhanced successful ITI implementation (Burns, 1994).

Participants made two major recommendations based on these conditions: (1) Before ITI is implemented, school faculty and community should (a) learn about ITI concepts, processes, and conditions; and (b) determine their readiness and desire to begin ITI. (2) AEL should develop resources to support ITI implementation (Burns, 1994).

In response to these recommendations, Rebecca Burns, the ITI project director, wrote *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools* (1995). This book, with the *Facilitator's Guide,* is a professional development tool designed to increase a faculty's understanding of curriculum integration and to assist them with decision making about ITI implementation. Since the spring of 1995, AEL staff have conducted 48 *Dissolving the Boundaries* professional development sessions in 12 states, as well as the District of Columbia and Puerto Rico. Additionally, the book is used by schools, districts, and colleges in 42 states, Puerto Rico, Nepal, and Argentina.

To assist schools that were ready to design and implement ITI, three summer institutes were held between June 1995 and August 1996 to help teams of teachers and administrators from 14 schools (representing five states) build capacity for collaboration and interdisciplinary teamed instruction. Two of the institutes were held in 1995: The first was intended to field test the ITI concept outside the parameters of a research and development project, and included four schools from Virginia, one from Tennessee, and one from Texas. The second was a contracted activity conducted for one school in West Virginia. The third institute, held in Virginia in July 1996, is the basis for this report.

**1996 ITI Summer Institute**

The third ITI Summer Institute was held at Radford University in Virginia from July 7-12, 1996. Facilitators included AEL staff member Rebecca Burns and AEL consultants Douglas Fleming and Barbara Fleming. Also in attendance was the AEL evaluator, Merrill Meehan, and the AEL scaling-up project director, Robert Childers. The purpose of the Institute was to help participants design integrated units, plan learning activities and assessments, and present their units as a culminating activity at the close of the training.

Planning for the 1996 ITI Summer Institute focused on recruiting participants from sites where ITI had been introduced during the past year. Also, there was an emphasis on recruiting interns who might serve as trainers for future ITI institutes and workshops and who would promote the use of ITI in their locations. Recruitment was accomplished through personal contact by the ITI project leader, by telephone calls, and by mailing a descriptive brochure to other potential attendees (those who had sent teams to one of the 1995 institutes, who had purchased a copy of *Dissolving the Boundaries*, or who had requested information on ITI). One school district where Burns had conducted ITI workshops and one school that had participated in one of the 1995 ITI institutes enrolled teams; another site enrolled two interns. When AEL Board member Gary Ellerman of Radford University (VA) received information, he invited Burns to hold the Institute on the Radford campus. Subsequently, a Radford faculty member was accepted as an intern.

Thirty participants from four states attended the 1996 ITI Summer Institute. Four high school teams from Mercer County, West Virginia attended. These teams (a total of 22 participants) were part of a group that had participated in an ITI workshop in the spring of 1996 and would continue working with ITI through the 1996-97 school year. Four academic teachers and one vocational teacher from the county's technical education center comprised each team. Two of the teams also included a building administrator. A fifth team, from Athens, Tennessee, was composed of four eighth-grade teachers and their principal. This was the second year that Athens Junior High had sent a team to an ITI institute. In 1995, the Athens principal attended with his seventh-grade team. Rounding out the Institute membership were three interns. One intern was a Radford University education department faculty member. The other two interns were curriculum specialists from the Oklahoma Department of Education who had participated in a May 1995 ITI workshop for their staff in Oklahoma City.

**Purpose of this Evaluation**

The major purpose of this effort was to conduct a comprehensive evaluation of the 1996 ITI Summer Institute. This evaluation focused on the processes, outcomes, and products of the Institute. Key evaluation activities included administering questionnaires on teacher empowerment, schools as communities of learners, school effectiveness, and teachers' sense of control; on-site observations; face-to-face interviews with participants; reflective assignments for

participants; participant feedback forms; oral evaluation feedback provided during the Institute; and review and rating of participants' videotaped presentations. This comprehensive evaluation of the 1996 ITI Summer Institute was viewed as a means of collecting baseline evaluative information from the first of a series of similar summer institutes planned for this contract period at AEL. Decisions regarding the evaluations of future ITI summer institutes were expected to be informed by the methodology and instrumentation employed in this evaluation.

**Major Objectives**

The major objectives of this evaluation included the following:

- to measure participants' sense of personal locus of control
- to evaluate the processes of the ITI Institute via participants' reflective assignments, feedback forms, personal interviews, and observations of activities
- to evaluate participants' culminating activity of videotaped presentations, completed in teams
- to assess the outcomes of the ITI Institute on participants' sense of teacher empowerment and professional learning community
- to assess the outcomes of the ITI Institute on participants' perceptions of their organization's effectiveness

**Audience for this Report**

The primary audience for this report includes AEL staff and consultants, to provide input for modifying future institutes, and the Office of Educational Research and Improvement, AEL's funding agency. Secondary audiences may include those interested in interdisciplinary teamed instruction, those interested in the effectiveness of summer institutes for teachers, and the actual participants of the 1996 ITI Summer Institute and their administrators.

## METHODOLOGY

This section presents the methodology used in completing the comprehensive evaluation of the ITI 1996 Summer Institute. Descriptions of the schedule, the data collection techniques, and the evaluation procedures are presented below.

### Institute Schedule

The Institute was held at Radford University in Virginia, from July 7-12 (see Appendix A for a copy of the agenda). Registration and check-in began on Sunday afternoon, July 7, followed by an overview session covering introductions, expectations, team roles, team needs, networking, and journaling. Each participant received a copy of Burns' book, *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools*. Participants also received notebooks containing additional handouts.

Monday, July 8, began with an administrators' breakfast, and then participants were asked to complete the "Teacher Questionnaire" and the "School as Community Questionnaire." This was followed by a session on "Developing Teams: Roles, Rules, Relationships, Results." After a mid-morning break, concurrent sessions were held on "Conflict Resolution," "Tools for Testing Consensus," and "Group Roles and Functions."

Following lunch, a "Team Exploration and Debriefing" session was conducted throughout the afternoon. This was a unique team-building session, in that each team was to design and construct a mousetrap-powered vehicle; these vehicles were then used in videotaped comparative trials with other teams. Mousetrap vehicles were constructed from materials such as cardboard, styrofoam, wood, plastic, rubber bands, string, cans, etc., and, of course, a mousetrap. In addition to team building, the session also introduced participants to the concept of performance assessment using a scoring rubric. Each vehicle was scored as either a Master, Journeyman, or Apprentice on five areas: (1) conforms with design specifications, (2) applies principles of force and motion, (3) shows testing and refinement using gathered data, (4) travels in a straight line, and (5) demonstrates reliability in use. Another "Team Planning and Reflections" session was held after dinner.

An administrators' breakfast was again held on Tuesday, July 9, followed by "Five Stages of Integration: Reviewing and Rating ITI Examples." The second morning session was "Discovering 'Fertile' Themes." After lunch, a "Team Applications: Unit Design" session was held, including "Generating Learner Goals" and "Identifying Powerful Learning." The second afternoon session provided team planning time, with topics such as "Beginning the Unit Development—Selecting a Theme, Framing Essential Questions, and Designing Powerful Learning Experiences."

Following the administrators' breakfast on Wednesday, July 10, participants were asked to complete a "Control Questionnaire" and a "School Products and Services Questionnaire." A short session was held afterward on "Learning Principles and Authentic Tasks." Afterwards, concurrent sessions were held on "Cooperative Learning," "Problem-Based Learning," and "Multiple Intelligences." Following the morning break, additional concurrent sessions were held on "Cooperative Tasks," "Community-based Learning," and "Writing to Learn." The first afternoon session focused on "Structuring a Powerful Learning Experience," followed by "Team Planning: Incorporating Authentic Tasks into Your Unit" and "Team Reflections."

Thursday, July 11, again began with an administrators' breakfast, followed by two morning sessions: "Understanding Alternative Assessment" and "Constructing Scoring Rubrics." After lunch, the entire afternoon session was devoted to "Team Planning Time: Construct a Rubric to Assess Student Performance, Construct a Rubric to Assess Unit Performance, and Team Reflection." After dinner, teams worked on preparing their team exhibit.

The last day of the Institute was Friday, July 12, which began with a final administrators' breakfast. Two short morning sessions were held on "Planning for Re-Entry" and "Team Action Plans." After the mid-morning break, team exhibitions were conducted and videotaped. After all teams were finished, certificates were presented, and then participants were asked to complete a "Feedback Form," the "Teacher Questionnaire," and the "School as Community Questionnaire."

**Data Collection Techniques**

Data collection included a mix of quantitative and qualitative techniques, including four surveys, a feedback form, interviews, observations, videotaped presentations, and reflective activities. Each method is discussed below.

**Surveys**. Four paper and pencil surveys were administered to participants in the 1996 ITI Summer Institute. Each survey is discussed in turn.

*Teacher Questionnaire*. The first survey was labeled the "Teacher Questionnaire" (see Appendix B for a copy of the questionnaire). This is AEL's adaptation of the School Participant Empowerment Scale (SPES) originally developed by Short and Rinehart (1992). The SPES was administered to 4,091 teachers in 183 restructuring schools in Ohio by Klecker and Loadman (1996), who re-factor analyzed the 38 items of the SPES into six subscales. All 38 items use the 5-point Likert-type response options of 1 = Strongly Disagree to 5 = Strongly Agree. The six subscales and their Alpha internal consistency reliabilities were (1) Status, .80; (2) Professional Growth, .70; (3) Self-Efficacy, .89; (4) Decision Making, .80; (5) Impact, .83; and (6) Autonomy in Scheduling, .83. The number of items per subscale varied from a low of 3 for Autonomy in Scheduling to a high of 12 for Self-Efficacy. Klecker and Loadman (1998) conducted another factor analysis of the SPES using a subsample of 3,113 of the teachers in their larger sample. This second validity study confirmed their first study's results.

AEL staff typeset the SPES items to fit on both sides of one 8 ½" by 11" page using two columns per side. Through an error in printing, one item was included twice and another item was omitted. However, inspection of the duplicated item in Klecker and Loadman's published article (1998, pp. 950-951) revealed that it actually loaded on all six factors. So, the consequences of counting it on two subscales were minimal. In addition to the 38 items, AEL staff added eight constructed-response demographic items at the end. These demographic questions asked respondents to supply their grades taught, subjects taught, years taught in any school, years taught in present school, employed full or part time, degree and credits earned, gender, and age.

Table 1 displays the Cronbach Alpha internal consistency reliabilities for all four surveys employed in this evaluation. The Teacher Questionnaire Alphas are displayed first in Table 1, for each of its three administrations. Generally, the Alphas are acceptable, but some are higher than others. As expected, the full 38-item Alphas are high at .85 and .93, as are the 12-item Self-Efficacy subscale Alphas at .88 and .93. The 6-item Status subscale Alphas are .83, .89, and .78. Interestingly, the 3-item Autonomous Scheduling subscale has Alphas of .85, .90, and .80. The lowest Alphas are .59, .60, and .77 for the Professional Growth subscale.

*School as Community Questionnaire*. The second survey was labeled the "School as Community Questionnaire" (see Appendix C for a copy of the questionnaire). This survey is AEL's adaptation of school-wide professional learning community items included in a paper presented by Karen Seashore Louis and Helen Marks at the 1996 American Educational Research Association (AERA) Annual Meeting in New York City. The construct of school-wide professional community is rather new in educational research. Louis and Marks' work in the area grew out of connections with Fred Newmann and associates in a national R&D study of restructuring schools (Newmann & Wehlage, 1995). At the same time, Shirley Hord was conducting her research in the same general area, although she chose to label her construct Professional Learning Community (1997). Hord developed an instrument to measure professional learning community that proved reliable and valid in a field test (Meehan, Orletsky, and Sattes, 1997). Also, Royal, DeAngelis, and Rossi (1996) used items from the large, nationally representative Schools and Staffing Survey (SASS) from both 1987-88 and 1993-94 to construct a measure of teachers' sense of community within schools.

AEL staff constructed the school-wide professional learning community instrument by adapting the 22 items that appeared in Louis and Marks' 1996 American Educational Research Association paper and also in a subsequent article published in the *American Educational Research Journal* (Louis, Marks, & Kruse, 1996). In AEL's adaptation of items, references to "Since the beginning of the school year . . ." were dropped and the response options were placed directly under the stem statement. The response option for the stem statements was a 5-point Likert-type scale from 1 = Strongly Disagree (SD) to 5 = Strongly Agree (SA). The five subscales in the instrument are Shared Sense of Purpose, Collaborative Activity, Collective Focus on Student Learning, Deprivatized Practice, and Reflective Dialogue. The number of items per subscale varied from a low of 3 items (two scales) to a high of 6 items (two scales). The 22 items fit on both sides of one 8 ½" x 11" page using two columns per side. As with the other instruments and because of the independent development of the measures, the remaining space was used to collect demographic information. These eight questions were the same as those included on the SPES instrument.

Table 1:
Alpha Reliabilities for the Four Instruments
and Their Subscales by Administration Time

| Instrument Name<br>Subscale Name | Number of Items | Alpha Reliabilities | | |
|---|---|---|---|---|
| | | Pretest Administration | End of Institute | Posttest Administration |
| Teacher Questionnaire | 38 | .93 | .93 | .85 |
| Status | 6 | .83 | .89 | .78 |
| Professional Growth | 4 | .59 | .60 | .77 |
| Self-Efficacy | 12 | .88 | .88 | .93 |
| Decision Making | 8 | .78 | .82 | .76 |
| Impact | 5 | .76 | .82 | .68 |
| Autonomy in Scheduling | 3 | .85 | .90 | .80 |
| School as Community Questionnaire | 22 | .92 | .93 | .90 |
| Shared Sense of Purpose | 3 | .57 | .78 | .86 |
| Collaborative Activity | 6 | .87 | .79 | .84 |
| Collective Focus on Student Learning | 4 | .60 | .70 | .75 |
| Deprivatized Practice | 3 | .65 | .66 | .69 |
| Reflective Dialogue | 6 | .89 | .87 | .62 |
| School Products and Services Questionnaire | 8 | .85 | N/A | .91 |
| Control Questionnaire | 28 | .80 | N/A | N/A |
| Self-Confidence | 14 | .78 | N/A | N/A |
| Autonomous Behavior | 14 | .63 | N/A | N/A |

Table 1 displays the Cronbach Alpha reliabilities for the total School as Community Questionnaire and its five subscales across three administrations. Generally, the Alphas are satisfactory, but some are higher than others. For example, the full 22-item Alphas were .92, .93, and .90 for the three administrations, respectively. The 6-item Collaborative Activity subscale Alphas are .87, .79, and .84, followed by those for Reflective Dialogue at .89, .87, and .62. The 4-item Collective Focus on Student Learning subscale Alphas are .60, .70, and .75. As expected, the Alphas for the two 3-item subscales are a little lower, with only the pretest Alpha for the Shared Sense of Purpose subscale dipping into the .50s (.57).

*School Products and Services Questionnaire*. The third survey was labeled the "School Products and Services Questionnaire" (see Appendix D for a copy of the questionnaire). This is AEL's adaptation of the "Index of Perceived Organizational Effectiveness" (IPOE) instrument originally developed and published by Paul E. Mott (1972) and then modified for use in schools by Miskel, Fevurly, and Stewart (1979) and more recently by Hoy and Ferguson (1985). The IPOE is an eight-item, self-report instrument in which teachers rate the overall effectiveness of their school on four dimensions (quality and quantity of product, efficiency, adaptability, and flexibility) with two items for each dimension. Respondents select one of five options on a Low (1) to High (5) scale, but the response options/descriptors vary by the item stem. For example, for the first item on quantity of production, the responses range from "Low Production" to "High Production," with three other descriptors between them. Possible scores range from a low of 8 points to a maximum of 40 points; the higher the score on the IPOE, the greater the perceived organizational effectiveness of the school.

AEL staff typeset the IPOE items to fit on both sides of one 8 ½" x 11" page, five items on the front (preceded by instructions) and the remaining three on the back. Additionally, staff added six demographic questions on the back. Many of these were the same as those on the SPES, but role group was a new item. (The duplication of demographic items is a function of producing the instruments at different times.)

The IPOE has been used in many studies over the years. Early studies reported high reliablity coefficients; for example, .89 by Miskel, Fevurly, and Stewart (1979). Similar reliability figures were reported by Hoy and Fergurson (1985) and, more recently, Loup and Ellett (1995) reported it to be .85. Table 1 shows that the School Products and Services Questionaire (IPOE) Alpha reliabilities in this study were .85 at pretest and .91 at post test.

*Control Questionnaire*. The fourth survey was labeled the "Control Questionnaire" (see Appendix E for a copy of the questionnaire). This survey is AEL's formatting of the "Internal Control Index" instrument developed by Pat Duttweiler (1984). The construct of locus of control is a personality trait that appears to influence human behavior across a wide variety of situations related to learning and performance. Much research on the locus of control construct has been completed over the past 30 years (Lefcourt, 1976; Rotter, Chance, & Phares, 1972). Locus of control relates to an individual's expectancy for positive reinforcement. An individual with an internal control orientation believes that positive reinforcement depends on his or her own behavior whereas an individual with an external control orientation believes that positive reinforcement depends on chance, luck, or others (Rotter, Chance, & Phares, 1972).

The Internal Control Index was developed by Duttweiler (1984) to measure the internal locus of control orientation of adults. Duttweiler sought to improve on previous locus of control instruments that suffered from a variety of problems including low item-total score correlations, their forced choice format, response set, and the heterogeneity of the external control orientation. Duttweiler completed four distinct phases in the development of the new instrument: pretesting item development, tryout (pilot) testing, field testing, and a replication study. The final instrument consists of 28 different statements with one key word missing. The response format requires the respondent to choose one of five alternative words to insert into the statement. The five alternative words and their associated letters to insert in the blank space are Rarely (A), Occasionally (B), Sometimes (C), Frequently (D), and Usually (E). For example, the first item in the instrument is: "When faced with a problem I ___ try to forget it." The respondent chooses one of the five alternative words that best completes the statement and writes the letter for that word in the blank space. All 28 items fit on one page, printed front and back and, per Duttweiler's goal to eliminate response set, 14 of the items are reverse scored. AEL did not add demographic items to this particular instrument.

Duttweiler (1984) completed several reliability and validity studies on the Internal Control Index. The internal consistency reliability for the field-test phase ($N = 548$) was .84 and, for the replication study ($N = 133$), it was .85. As part of the validity checks, two factor analyses were completed. The first yielded two main subscales of Self-Confidence and Autonomous Behavior, while the second produced very similar results. The Self-Confidence subscale appears to measure confidence in one's own ability and it accounted for 69% of the common variance. This subscale consists of 14 of the instrument's 28 items. The second subscale measures internally high responses to 14 other items that appear to represent a theme of Autonomous Behavior. That is, these 14 items portray behaviors that are "relatively independent of social reinforcement or social pressure" (p. 216). These 14 items accounted for the other 31% of the common variance. As part of the convergent validity study, a significant negative correlation was found between the Internal Control Index and Mirel's Factor I of the Rotter I-E Scale. Since the Rotter scale is a measure of external locus of control, the negative correlation with the Internal Control Index was expected.

Table 1 displays the number of items and internal consistency reliabilities (Alphas) for the Self-Confidence and Autonomous Behavior subscales and total instrument as used in this evaluation (single administration only). Data in Table 1 show the 14-item Self-Confidence subscale Alpha is .78, the 14-item Autonomous Behavior subscale Alpha is .63, and the Alpha for the 28-item total instrument is .80.

**Feedback form.** Participants were asked to complete this three-page form at the conclusion of the Institute (see Appendix F for a copy of the form). The first page contained 3 demographic items (name, date, and position), followed by 15 closed-ended items, which participants were to complete by using a scale of 1 (Not at all) to 5 (Very much). The next two pages contained 4 open-ended items each, and provided ample space for participants' responses.

**Interviews and observations.** The AEL evaluator conducted on-site interviews with participants (see Appendix G for a list of questions). These structured interviews took place during breaks, lunches, or after sessions were completed each day. Each interview consisted of five open-ended questions; responses were recorded on summary sheets. The AEL evaluator also attended most of the activities and observed both the proceedings and the participants' reactions. Written notes were generated from this activity, and the evaluator met on-site with the presenters during the Institute (days and evenings) to provide formative evaluation information.

**Reflective activities.** These activities included the "Role-Alike Caucus" (see Appendix H for the activity sheet) and "Team Reflection Log" (see Appendix I for a copy of the log). For the role-alike activity, participants were asked to assemble into one of six role groups (administration, social studies, English/language arts, mathematics, science, and other). Participants were then given a set amount of time to respond as a group to two reflective questions. For the team reflection activity, individual teams were asked to meet briefly following each day's activities (except for the last day) to debrief and think about their needs and concerns and then record their thoughts.

**Videotaped presentations.** As the culminating activity, each team was asked to make a curriculum unit presentation at the conclusion of the Institute, and each presentation was videotaped. Criteria for assessing this activity were distributed and discussed with participants during the week. The evaluators adopted the Institute's scoring rubric for their assessment of the teams' presentations (see Appendix J for a copy of the rubric).

## Evaluation Procedures

This section describes how data collection took place for each of the activities described earlier, and how resulting data were analyzed.

**Surveys.** Each of the four surveys (Teacher Questionnaire, School as Community Questionnaire, School Products and Services Questionnaire, and Control Questionnaire) were administered on either Monday or Wednesday of the Institute. Participants were given time during the morning sessions to complete the instruments, which the AEL evaluator distributed. On Friday, the Teacher Questionnaire and School as Community Questionnaire were re-administered to participants during the morning session. Each survey was administered to all those participants present at each administration.

The Teacher Questionnaire, School as Community Questionnaire, and School Products and Services Questionnaire were re-administered again in April 1997 to assess participants' changes (growth or decline) in relevant areas. These surveys were mailed to respondents on April 9 (with a cover letter and a self-addressed envelope), and a follow-up notice was sent in May. Of the 30 surveys mailed to participants, 19 usable questionnaires were returned for a return rate

of 63%. However, not every returned survey had complete data and, thus, the number of matched pairs for the *t* tests of subscales and total instrument scores varied from 14 to 18.

Using SPSS, a statistical software program, the AEL evaluator created databases for each of the above surveys. Data were entered by AEL support staff, and were then cleaned and verified before analyses were conducted. The first step was to compute the internal consistency reliabilities (Cronbach Alpha) for each scale and subscale, where appropriate. Next, descriptive statistics were computed for each scale and subscale. This was especially important for the Control Questionnaire as it was administered only once. The *t* tests by the matched pairs method were computed for each applicable pair of scale and subscale scores. For the School Products and Services Questionnaire and the School as Community Questionnaire, two *t* tests were completed for each subscale and total scale score (pretest to end of Institute and pretest to posttest). The alpha level was set at .10. Last, effect sizes were computed for each *t* test and Cohen's (1977) scheme for effect size descriptors was adopted.

**Feedback form.** The Feedback Form was administered by the AEL evaluator to 29 participants on Friday morning at the conclusion of the Institute. Again using SPSS, a database was created and data were entered. After cleaning, descriptive analyses were conducted for the 15 Likert-type items on the first page of the survey. For the next two pages of open-ended responses, another AEL evaluator read the responses and assigned them to appropriate categories or themes.

**Interviews and observations.** The on-site interviews were conducted by the AEL evaluator during the Institute. A summary sheet was completed for each of the 29 interviews, and these sheets formed the data for subsequent analysis. As well, notes taken for the evaluator's observations during the Institute were reviewed and included in subsequent feedback sessions with the trainers as formative evaluation. These oral formative evaluation data are not included in this report.

**Reflective activities.** The reflective activities were completed by participants during the Institute. Unlike the previous evaluation instruments, which were designed and administered by the evaluator, the reflective activities were designed and administered by the Institute staff. Then, the completed reflective activity outputs were collected and turned over to the evaluation staff as input to this evaluation. The role-alike activity took place early during the Institute, and completed group forms were submitted to the presenters. These summary sheets served as data for this analysis. Five team reflection logs from Sunday through Thursday were also gathered before the close of the Institute for subsequent analysis.

**Videotaped presentations.** The participants were asked to make team exhibitions, which were videotaped by Institute staff. These videos were reviewed and rated by the AEL evaluators using a scoring rubric provided by Institute staff and shared with participants earlier.

## FINDINGS

This section presents the findings for each of the data collection techniques used in this comprehensive evaluation of the ITI 1996 Summer Institute, preceded by a discussion of the characteristics of the participants, gleaned from the demographic questions on three of the four surveys.

### ITI Institute Participants

As stated above, 30 participants from four states attended the 1996 ITI Summer Institute. The majority of the participants (22) were from one county in West Virginia. They represented four high school teams comprised of four academic teachers and one vocational teacher from the county's technical education center. Two of these West Virginia teams also included a building administrator. A fifth team was from a junior high school in Tennessee and included four eighth grade teachers and the principal. Three ITI interns participated in the 1996 Summer Institute, one a faculty member from Radford University (Virginia) and two were curriculum specialists from the Oklahoma Department of Education.

Of the 30 institute participants, 24 were female and 6 were male. Their ages ranged from 24 to 62 years with a mode of 46.00, a mean of 48.43, and a median of 48.50. In terms of their educational level, one third possessed a master's degree plus 45 credits, 7 had a master's plus 30 credits, 4 had a master's plus 60 credits, and 3 had a master's degree. One participant each reported possessing a bachelor's degree, a bachelor's plus 15 credits, a bachelor's plus 45 credits, an educational specialist certificate, and a master's plus 15 credits. All 30 participants reported working full time in their jobs. With respect to subjects taught, 5 indicated vocational subjects; 4 each indicated math and/or computer, English/language arts, and history/social studies; 3 each indicated combination subjects, other (art, music, etc.), and administration; 2 indicated foreign languages; and 1 participant indicated science. One additional participant did not respond to this item.

Participants reported teaching a total of 14 different grade levels and/or combinations of grade levels. The 9-12 grade-level group had the largest number of participants (11). The 10-12 and 11-12 grade-level groups each had 3 participants in them, while all the others had just 1 or 2 participants. On balance, the group was very experienced at teaching, with a mean of 22.00 years and a maximum of 38.00 years. The minimum years of total teaching experience was 5.00, but the median was 22.50 and the mode was 19.00. The mean number of years of teaching in their current school was 8.57, with a minimum of 1.00 and a maximum of 22.00. The median years of teaching at their current school was 6.00 and the mode was 2.00.

**Teacher Questionnaire**

Tables 2 and 3 display the results of the three administrations (pretest, end-of-institute, and posttest) of the Teacher Questionnaire to the ITI Institute participants. The six subscale results are presented in Table 2, while the Teacher Questionnaire Total Score results are presented in Table 3. The number of participants with both scores for the *t* tests varied from 16 to 28 for the subscales and was 14 and 23 for the Total Score.

The Status subscale results are displayed first in Table 2.* The possible score could range from 6 to 30 points. For the 27 participants with both pretest and end-of-institute scores, their pretest mean was 23.63 with a standard deviation of 3.61. At the end-of-institute administration, their mean score declined 0.89 to 22.74, while the standard deviation increased to 4.13. The resultant *t* value was 2.22, which was significant at the .05 level. This is one of only two significant *t* values in Tables 2 and 3. The effect size was -0.247, which was "small" in Cohen's (1977) terms. The pretest to posttest score also showed a small decline (0.28) from 23.72 to 23.44. The standard deviation also declined slightly to 3.89. The *t* value was a very small 0.28, nowhere close to being significant. The effect size of -0.066 was much "less than small."

The Professional Growth subscale results are displayed second in Table 2. With the possible score ranging from 4 to 20 points, the pretest mean declined 0.14 at the end-of-institute administration. Also, the standard deviation declined slightly, as did the standard error of the mean. The resulting *t* value was very small at 0.45, which was not close to being significant. At -0.072, the effect size for this first *t* test for the Professional Growth subscale was much "less than small." The pretest to posttest score increased slightly (0.22) to 17.56. The standard deviation and the standard error of the mean also declined. However, the 0.37 *t* value was not close to being significant. The 0.107 effect size was "less than small."

Self-Efficacy subscale results are displayed next in Table 2. The possible score could range from 12 to 60 points. The mean score in the first *t* test increased 0.23 to 49.69, while the standard deviation decreased to 4.31. The resulting *t* value of just 0.36 was nowhere close to significance. The effect size of 0.047 was much "less than small." The mean score in the pretest to posttest *t* test increased 1.38 to 50.13, while the standard deviation decreased almost 1 point. At 0.97, the *t* value was not significant, but the 0.253 effect size was "small" in Cohen's terms.

The Decision Making subscale results are the fourth set of rows in Table 2. The possible score could range from 8 to 40 points. In the first *t* test, the mean score increased 1.38 to 26.08, while both the standard deviation and the standard error of the mean decreased slightly. The *t* value was 2.15, significant at the .05 level. This is the second significant *t* value in Tables 2 and 3. At 0.250, the effect size was "small." The second *t* test increased by 2.00 to 25.59, while both the standard deviation and the standard error of the mean decreased slightly. At 1.64, the *t* value was not significant, but the 0.367 effect size was "small" and the next to largest such value in Table 2.

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*Due to rounding, slight discrepancies might occur between the Mean and Mean Score Difference columns.

Table 2:
Teacher Questionnaire Subscale *t* Tests and
Effect Sizes Over Three Administrations

| Administration Time | Number of Pairs | Mean | Standard Deviation | Standard Error of Mean | *t* Value | Probability | Mean Score Difference | Effect Size |
|---|---|---|---|---|---|---|---|---|
| **Status** | | | | | | | | |
| Pretest<br>End of Institute | 27 | 23.63<br>22.74 | 3.61<br>4.13 | 0.694<br>0.795 | 2.22 | .035[a] | -0.89 | -0.247** |
| Pretest<br>Posttest | 18 | 23.72<br>23.44 | 4.23<br>3.89 | 0.996<br>0.821 | 0.28 | .781 | -0.28 | -0.066* |
| **Professional Growth** | | | | | | | | |
| Pretest<br>End of Institute | 28 | 17.50<br>17.36 | 1.93<br>1.75 | 0.366<br>0.330 | 0.45 | .659 | -0.14 | -0.072* |
| Pretest<br>Posttest | 18 | 17.33<br>17.56 | 2.14<br>1.58 | 0.505<br>0.372 | 0.37 | .717 | 0.22 | 0.107* |
| **Self-Efficacy** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 49.46<br>49.69 | 4.84<br>4.31 | 0.950<br>0.844 | 0.36 | .719 | 0.23 | 0.047* |
| Pretest<br>Posttest | 16 | 48.75<br>50.13 | 5.45<br>4.54 | 1.362<br>1.136 | 0.97 | .348 | 1.38 | 0.253** |
| **Decision Making** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 24.69<br>26.08 | 5.55<br>5.20 | 1.088<br>1.020 | 2.15 | .042[a] | 1.38 | 0.250** |
| Pretest<br>Posttest | 17 | 23.59<br>25.59 | 5.47<br>4.78 | 1.326<br>1.160 | 1.64 | .120 | 2.00 | 0.367** |
| **Impact** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 17.15<br>17.15 | 3.59<br>3.77 | 0.703<br>0.739 | 0.00 | 1.000 | 0.00 | 0.000 |
| Pretest<br>Posttest | 17 | 17.41<br>18.59 | 3.54<br>2.72 | 0.858<br>0.659 | 1.31 | .210 | 1.18 | 0.334** |
| **Autonomy in Scheduling** | | | | | | | | |
| Pretest<br>End of Institute | 27 | 8.26<br>8.85 | 3.60<br>3.12 | 0.693<br>0.601 | 1.25 | .221 | 0.59 | 0.164* |
| Pretest<br>Posttest | 17 | 7.71<br>9.12 | 3.75<br>2.91 | 0.911<br>0.706 | 1.71 | .107 | 1.42 | 0.376** |

*Effect Size = Less than small. **Effect Size = Small. [a]Significant at .05.

Table 3:
Teacher Questionnaire Total Score *t* Tests and Effect Sizes
Over Three Administrations

| Administration Time | Number of Pairs | Mean | Standard Deviation | Standard Error of Mean | *t* Value | Probability | Mean Score Difference | Effect Size |
|---|---|---|---|---|---|---|---|---|
| Total Scale Score | | | | | | | | |
| Pretest | 23 | 139.39 | 16.50 | 3.39 | 0 .82 | .422 | 1.48 | 0.091* |
| End of Institute | | 140.87 | 15.42 | 3.22 | | | | |
| Pretest | 14 | 135.29 | 17.34 | 4.63 | 1.65 | .122 | 8.43 | 0.486** |
| Posttest | | 143.71 | 11.70 | 3.13 | | | | |

*Effect Size = Less than small.

**Effect Size = Small.

The Impact subscale results are displayed next in Table 2. With a possible score from 5 to 25 points, the first *t* test reported no change in scores—up or down. With no score difference, there was no *t* value nor effect size. For the second *t* test on the Impact subscale, there was a 1.18 increase in the mean score to 18.59 at posttest. Both the standard deviation and standard error of the mean declined slightly. The 1.31 *t* value was not significant, but the 0.334 effect size was "small."

The last subscale in Table 2 is Autonomy in Scheduling with the possible score ranging from 3 to 15 points. The mean score in the first *t* test increased by 0.59 to 8.85, with a standard deviation of 3.12. The 1.25 *t* value was not significant, while the 0.164 effect size was "less than small." The second *t* test showed a 1.42 increase in the mean, with a standard deviation of 2.91 and a standard error of the mean of 0.706. At 1.71, the *t* value was not significant. However, the pretest to posttest effect size of 0.376 is the largest such value in Table 2, although, according to Cohen's terms, it is labeled "small."

Table 3 displays the results of the three administrations of the Teacher Questionnaire in terms of the Total Score. The possible score could range from 38 to 190 points. For the 23 participants with complete data, the pretest mean increased 1.48 at the end-of-institute administration. The standard deviation declined more than 1 point and the standard error of the mean declined slightly. At 0.82, the *t* value was not significant and, at 0.091, the effect size was much "less than small." The pretest to posttest mean score rose 8.43 points to 143.71, while the standard deviation declined nearly 6 points to 11.70. The *t* value of 1.65 was not significant. However, the effect size of 0.486, the largest such value for the Teacher Questionnaire, was labeled "small" but is very close to the lowest value for an effect size to be labeled "medium" by Cohen, which is 0.500.

**School As Community Questionnaire**

Table 4 Displays the results of the three administrations (pretest, end-of-institute, and posttest) of the School as Community Questionnaire to the institute participants. All five subscales and the Total Score results are presented in Table 4. The number of participants with both scores for the *t* tests varied from 18 to 27 for the subscales and was 24 and 18 for the Total Score.

The Shared Sense of Purpose subscale results are displayed first in Table 4. The possible subscale score could range from 3 to 15 points. The pretest mean was 9.89 and the standard deviation was 1.81. The end-of-institute mean increased 0.22 to 10.11, while the standard deviation increased to 2.46 for the 27 participants. The standard error of the mean also increased to 0.472. The resultant *t* value was a low 0.69, which was not close to being significant. The effect size was 0.122, which was "less than small" in Cohen's terms. The pretest to posttest scores showed a very small increase of 0.05 to 10.32, while the standard deviation increased 0.59 to 2.69. The standard error of the mean also increased to 0.617. The *t* value was extremely small at 0.09 and was close to unity. The effect size of 0.029 was much "less than small."

Table 4:
School as Community Questionnaire Total Scale and
Subscale *t* Tests and Effect Sizes Over Three Administrations

| Administration Time | Number of Pairs | Mean | Standard Deviation | Standard Error of Mean | *t* Value | Probability | Mean Score Difference | Effect Size |
|---|---|---|---|---|---|---|---|---|
| **Shared Sense of Purpose** | | | | | | | | |
| Pretest<br>End of Institute | 27 | 9.89<br>10.11 | 1.81<br>2.46 | 0.347<br>0.472 | 0.69 | .496 | 0.22 | 0.122* |
| Pretest<br>Posttest | 19 | 10.26<br>10.32 | 2.10<br>2.69 | 0.483<br>0.617 | 0.09 | .932 | 0.05 | 0.029* |
| **Collaborative Activity** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 15.38<br>17.77 | 4.47<br>4.17 | 0.877<br>0.818 | 3.11 | .005[a] | 2.38 | 0.534*** |
| Pretest<br>Posttest | 19 | 16.00<br>18.11 | 4.33<br>4.37 | 0.994<br>1.003 | 1.86 | .079[c] | 2.11 | 0.487** |
| **Collective Focus on Student Learning** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 14.62<br>14.96 | 2.35<br>2.41 | 0.461<br>0.472 | 0.63 | .534 | 0.34 | 0.145* |
| Pretest<br>Posttest | 19 | 15.32<br>15.84 | 2.24<br>2.39 | 0.513<br>0.548 | 0.70 | .494 | 0.53 | 0.232** |
| **Deprivatized Practice** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 6.54<br>6.69 | 2.58<br>2.54 | 0.506<br>0.499 | 0.45 | .655 | 0.15 | 0.058* |
| Pretest<br>Posttest | 18 | 6.94<br>6.94 | 2.90<br>2.44 | 0.683<br>0.574 | 0.00 | 1.000 | 0.00 | 0.000 |
| **Reflective Dialogue** | | | | | | | | |
| Pretest<br>End of Institute | 26 | 18.00<br>18.88 | 5.16<br>4.79 | 1.012<br>0.939 | 1.51 | .143 | 0.88 | 0.171* |
| Pretest<br>Posttest | 19 | 19.05<br>18.63 | 3.92<br>3.32 | 0.900<br>0.762 | 0.39 | .698 | -0.42 | -0.107* |
| **Total Scale Score** | | | | | | | | |
| Pretest<br>End of Institute | 24 | 64.83<br>68.79 | 13.48<br>13.82 | 2.752<br>2.821 | 2.09 | .048[b] | 3.96 | 0.294** |
| Pretest<br>Posttest | 18 | 67.22<br>66.78 | 12.37<br>17.15 | 2.916<br>4.042 | 0.09 | .927 | -0.44 | -0.036* |

*Effect Size=Less than small. **Effect Size=Small. ***Effect Size=Medium.
[a]Significant at .01. [b]Significant at .05. [c]Significant at .10.

The Collaborative Activity subscale results are displayed second in Table 4. With a possible score ranging from 6 to 30 points, the pretest mean increased 2.38 to 17.77 at end-of-institute. This was the largest increase across the five subscales in the table. The standard deviation decreased slightly to 4.17 and the standard error of the mean also decreased slightly. The resulting *t* value was 3.11, the largest in the table. This *t* value was significant at the .01 level, the only one in the table significant at that level. At 0.534, the effect size was "medium" and was the largest in Table 4. The pretest to posttest score increased 2.11 for the 19 participants, which was the second largest increase across the subscales. Also, both the standard deviation and the standard error of the mean increased slightly, the latter the second largest such value for the subscales. The *t* value was 1.86, which was significant at the .10 level. At 0.487, the effect size for the pretest to posttest subscale technically was "small," but is very close to the 0.500 value needed to be labeled "medium" by Cohen.

The Collective Focus on Student Learning subscale results are displayed next in Table 4 with possible scores ranging from 4 to 20 points. The mean score in the first *t* test increased 0.34 to 14.96, while the standard deviation also increased slightly (0.06) to 2.41. The resulting *t* value of 0.63 was not close to being significant and the 0.145 effect size was "less than small." For the 19 participants, their mean score increased 0.53 to 15.84, and the standard deviation increased slightly (0.15) to 2.39. The resulting *t* value of 0.70 was not close to being significant. However, the effect size of 0.232 was "small" for the pretest to posttest administration.

The Deprivatized Practice subscale results are the fourth set of rows in Table 4. With a possible score of 3 to 15 points, all four scores were less than 7 points. The first *t* test mean increased 0.15 to 6.69, whereas the standard deviation decreased slightly (0.04), as did the standard error of the mean (0.07). At 0.45, the *t* value was not significant and the 0.058 effect size was much "less than small." Interestingly, the pretest to posttest scores were the same at 6.94, yielding no *t* value or effect size. The standard deviation and standard error of the mean both decreased somewhat.

The last subscale in Table 4 is Reflective Dialogue with a possible score ranging from 6 to 30 points. The mean score in the first *t* test increased 0.88 from 18.00, while the standard deviation dropped slightly to 4.79. The standard error of the mean also decreased from 1.012 (the largest such value in the table) to 0.939. The *t* value was 1.51, which was not significant. The effect size was 0.171, which was "less than small." Unexpectedly, the pretest to posttest mean dropped 0.42 to 18.63 (although the pretest mean for the 19 participants was the highest for this subscale). Also, both the standard deviation and the standard error of the mean decreased at posttest. At 0.39, the *t* value was very small and nonsignificant. The effect size of -0.107 was "less than small."

The last set of rows in Table 4 display the results for the Total Score, which could range from 22 to 110 points. For the 24 participants, the pretest mean increased 3.96 to 68.79. Both the standard deviation and the standard error of the mean increased slightly. The resultant *t* value was 2.09, which was significant at the .05 level. The effect size of 0.294 was "small." Unexpectedly, the pretest to posttest mean decreased 0.44 to 66.78. The standard deviation increased almost 5 points to 17.15. The standard error also increased over 1 point to 4.042. The

resultant *t* value was a miniscule 0.09 and was close to unity. The effect size of -0.036 was much "less than small."

**School Products and Services Questionnaire**

Table 5 displays the results of pretest and posttest administrations of the School Products and Services Questionnaire. (This questionnaire was not planned to be administered at the end of the week-long institute.) The possible score on this instrument ranged from 8 to 40 and 18 participants had both scores. The pretest mean was 28.06 and its standard deviation was 4.64. The standard error of the mean was 1.095. The posttest mean increased 0.39 to 28.44, whereas the standard deviation decreased to 4.30. The standard error of the mean also decreased very slightly. The resultant *t* value was a very small 0.47, which failed to approach significance. The effect size was 0.082, much "less than small" in Cohen's scheme.

**Control Questionnaire**

Table 6 displays the results of the single administration of the Control Questionnaire. This instrument was administered to describe the institute participants on this construct, thus only descriptive statistics are presented in Table 6. There are two subscales and the Total Score for the Control Questionnaire, with complete data for 30 participants.

The Self-Confidence subscale results are displayed first in Table 6. The possible subscale score could range from 14 to 70 points. Actual scores ranged from a low of 47 points to a high of 66 points. The mode was 61.00 and the median was 59.50. The mean was 57.43, with a standard deviation of 6.55. The coefficient of variation (the standard deviation divided by the mean) was a low 0.114. The standard error of the mean on Self-Confidence was 1.195.

The Autonomous Behavior subscale results are displayed next in Table 6. With the same number of possible points (14-70), the actual scores ranged from a low of 41 to a high of 65. The modal score was 50.00, 11 points lower than that for the first subscale. The median was 51.50, 8 points lower than that for the first subscale. At 52.03, the mean was 5.40 points less than Self-Confidence. Moreover, the standard deviation was approximately half a point less at 5.92. Interesting, the coefficient of variation value was exactly the same as above, although the standard error of the mean was a little smaller (1.081).

The last section of Table 6 shows the Total Scale Score statistics for the Control Questionnaire. Here, the possible scale score could range from 28 to 140 points. The actual scores ranged from a low of 91 to a high of 131, only 9 points from the maximum possible score. The modal score was 93.00, and the median was 111.50. The mean was 109.47, with a standard deviation of 10.81. The coefficient of variation was just 0.099, the smallest of the three such values in the table. The standard error of the mean was 1.974, the largest of the three in the table.

Table 5:
School Products and Services Questionnaire *t* Test
and Effect Size Over Two Administrations

| Administration Time | Number of Pairs | Mean | Standard Deviation | Standard Error of Mean | *t* Value | Probability | Mean Score Difference | Effect Size |
|---|---|---|---|---|---|---|---|---|
| Total Scale Score | | | | | | | | |
| Pretest | 18 | 28.06 | 4.64 | 1.095 | 0.47 | .643 | 0.39 | 0.082* |
| Posttest | | 28.44 | 4.30 | 1.014 | | | | |

*Effect Size = Less than small.

Table 6:
Descriptive Statistics for the Control Questionnaire

| Number Respondents | Minimum | Maximum | Mode | Median | Mean | Standard Deviation | Coefficient of Variation | Standard Error of Mean |
|---|---|---|---|---|---|---|---|---|
| Self-Confidence | | | | | | | | |
| 30 | 47.00 | 66.00 | 61.00 | 59.50 | 57.43 | 6.55 | 0.114 | 1.195 |
| Autonomous Behavior | | | | | | | | |
| 30 | 41.00 | 65.00 | 50.00 | 51.50 | 52.03 | 5.92 | 0.114 | 1.081 |
| Total Scale Score | | | | | | | | |
| 30 | 91.00 | 131.00 | 93.00 | 111.50 | 109.47 | 10.81 | 0.099 | 1.974 |

**Feedback Form**

The Summer Institute Feedback Form was administered on the last day to 29 participants: 23 teachers, 5 administrators, and 1 intern. The overall internal consistency reliability was .74.

The first 15 items asked respondents to rate the extent to which the Institute had met 15 separate evaluative topics. The response option for each item was a scale of 1 (Not at all) to 5 (Very much). Table 7 displays the response option frequencies and percentages, means, and standard deviations for all 15 items. None of the items received a rating below a 4 on the 5-point scale. In fact, 3 of the items (#7, #11, and #12—all facilitator-related) received consistent ratings of 5 from all participants. Similarly, all 15 means were above 4.75, and standard deviations ranged only from 0.00 to 0.44.

Question 16 asked how respondents would describe the Institute experience to others. Out of the 41 comments generated, almost half (18, 44%) described it as positive (or similar terms); i.e., "A well-planned, carefully orchestrated, flexible workshop." The next frequent theme was motivating/rewarding (8, 22%), "It was inspiring and I'm ready to go to work!" Other themes included informative (5, 12%), team building (4, 10%), and miscellaneous (5, 12%). One participant noted, "It ties together in a meaningful way the tasks for teaching and provides the tools to do the job."

In Question 17, participants were asked what ideas, strategies, activities, or resources were most meaningful. A total of 76 were provided. The most frequently mentioned topic was team building (15, 20%), followed by the rubrics (10, 13%). Other identified topics included assessment (9, 12%), resources (7, 9%), and the "types of intellect" hats (6, 8%). A variety of other responses were provided, including multiple intelligences, the "hands" activity, consensus activities, and community-based learning.

Respondents were asked for major strengths of the Institute in Question 18. Of the 54 comments provided, the most frequently mentioned strength was team building (14, 26%), followed by new information/ideas (11, 20%) and organization/implementation (10, 19%). One participant commented, "Constant modeling of how to do block time (I *never* looked at my watch)." Other strengths included presenters (8, 15%), activities (5, 9%), participants (4, 7%), and interns (2, 4%).

Question #19 asked for recommendations for future institutes. Only 31 comments were generated for this question. Almost half (13, 42%) focused on adjusting the agenda or schedule. These recommendations ranged from giving participants more free time in the evenings to adding more evening activities, as well as adding more time for discussion. Six of the respondents (19%) said no changes were needed; in fact, one noted, "Hard to improve on perfection!" And, a few participants mentioned providing more examples/information, improving the facilities, and emphasizing team building.

Table 7:
Participants' Responses to 15 Evaluative Topics
on the End of Institute Feedback Form ($N = 29$)

| Items | Response Option Frequencies and Percentages | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|
| | Not at all 1 | 2 | 3 | 4 | Very much 5 | | |
| 1. Had clear outcomes. | – | – | – | 2<br>6.9% | 27<br>93.1% | 4.93 | 0.26 |
| 2. Promoted team building. | – | – | – | 1<br>3.4% | 28<br>96.6% | 4.97 | 0.19 |
| 3. Caused me to reflect on my practices. | – | – | – | 4<br>13.8% | 25<br>86.2% | 4.86 | 0.35 |
| 4. Caused me to examine some of my attitudes. | – | – | – | 7<br>24.1% | 22<br>75.9% | 4.76 | 0.44 |
| 5. Facilitated development of new skills. | – | – | – | 1<br>3.4% | 28<br>96.6% | 4.97 | 0.19 |
| 6. Was relevant to my needs. | – | – | – | 5<br>17.2% | 24<br>82.8% | 4.83 | 0.38 |
| 7. Was conducted in a positive manner. | – | – | – | – | 29<br>100.0% | 5.00 | 0.00 |
| 8. Had activities that were well sequenced.* | – | – | – | 4<br>14.3% | 24<br>85.7% | 4.86 | 0.36 |
| 9. Had activities that reinforced content. | – | – | – | 5<br>17.2% | 24<br>82.8% | 4.83 | 0.38 |
| 10. Included appropriate examples. | – | – | – | 4<br>13.8% | 25<br>86.2% | 4.86 | 0.35 |
| 11. Was conducted by competent trainers. | – | – | – | – | 29<br>100.0% | 5.00 | 0.00 |
| 12. Was conducted in a professional manner. | – | – | – | – | 29<br>100.0% | 5.00 | 0.00 |
| 13. Had meaningful involvement of participants. | – | – | – | 2<br>6.9% | 27<br>93.1% | 4.93 | 0.26 |
| 14. Stimulated me to use the concepts/skills/materials. | – | – | – | 3<br>10.3% | 26<br>89.7% | 4.90 | 0.31 |
| 15. Provided materials/ideas that will be useful to me. | – | – | – | 1<br>3.4% | 28<br>96.6% | 4.97 | 0.19 |

*$N = 28$.

In Question 20, participants were asked how the Institute had changed the way they thought about ITI. Of the 28 comments, 8 (29%) indicated a positive change, and 5 participants each (18%) mentioned a new belief or reinforcement of ITI ideas and seeing the "big" picture of what ITI comprises. Representative comments include "I was skeptical before; now I see it can be done and actually work" and "I now have the full/whole picture and will be able to share with others." Other changes were seeing the possibilities of using ITI (4, 14%), their enthusiasm to implement ITI (3, 11%), and the potential of using ITI in secondary schools (3, 11%).

Respondents were asked how they would use what they learned in Question 21. Of the 49 comments, 13 (27%) mentioned incorporating ideas and activities (unspecified) in the classroom ("I will change my methods of teaching"), while another 13 focused on team-building with teachers ("More teams in classroom and hopefully more teams with teachers across the curriculum"). Eleven of the comments (22%) identified specific activities to incorporate, such as rubrics, problem-solving, hats, cooperative learning, multiple intelligences, assessment, and journaling. Other themes included sharing information with colleagues and staff development uses (9, 18%) and adding student-based teams in the classroom (3, 6%).

Question 22 asked respondents how AEL could continue supporting curriculum integration efforts. Of the 37 comments, the two main suggestions were keeping in touch with participants (12, 32%) and providing new information and resources as available (11, 30%). Representative comments include "Just 'be there' for us—we will need your support" and "Keep up the outstanding work—this needs to be implemented in all of our schools." Other suggestions included followup sessions (5, 14%), internet or e-mail communications (4, 11%), and miscellaneous ideas (5, 14%).

Finally, Question 23 asked for other comments. Eleven of the 36 comments (31%) were congratulatory. Examples include "Super—great institute!!! Of my 25 years of educational workshops, this one ranks the highest on the Rubric Assessment"; "This has been time and money well spent"; and "In the end—closure does bring those connections and products that we came for." Nine of the comments (25%) mentioned positive aspects of the facilities, while 7 (19%) focused on negative aspects. And, 7 comments (19%) were simply "thank-you's."

**Interviews**

The AEL evaluator conducted individual interviews with 29 participants at some point during the Institute—during breaks, lunches, or evening hours. Interview results were hand-written on summary sheets, which formed the basis for this analysis.

The interviewer first asked how much decision-making authority the respondent had over *what* and *how* material was taught. Seven of the 29 respondents felt they had total control in deciding what was taught. In an interesting dichotomy, 6 more respondents noted they had total control over *what* was taught, as long as it was within state guidelines/curriculum—while 5 others

perceived they had no control over what was taught, indicating it was based on state guidelines. While the underlying premise seems to be the same for both viewpoints, there seems to be great discrepancy in participants' perceptions of that premise and how it relates to them. Six others said they had a great deal of freedom in selecting what to teach, and an additional 3 said they had limited authority. Two administrators indicated these decisions were made by teams or by department chairs. When reporting how much authority they had in deciding *how* material was taught, the majority (17) said they had total control in this area, 7 said they had a great deal of control, 2 said they had limited authority, and 1 indicated no authority in this area. Two administrators indicated they would not dictate how material was taught.

The second interview question asked respondents to describe ways they were helping students to become independent learners; 46 ways were provided. Critical thinking/analytical skills was most frequently mentioned, by 9 of the 29 participants. The second topic was activities and/or projects, mentioned by 5 participants. Four respondents each described cooperative learning, individualized learning, and computer training. Other teacher-focused responses included professional development, outside resources, questioning techniques, mastery teaching, and modeling. Other student-centered responses included self-evaluation, small groups, discussions, writing, research, self-esteem, and personal responsibility. Sample comments include: "I try to incorporate activities and skills that they will need in life, especially critical thinking skills." "I return questions with questions to students. I work hard on developing critical thinking in students." "I try to provide activities that provoke students to want to learn more." "This is my goal, to make them independent. I stress logical consequences of what they do." "I have them research answers. I make them look up words, answers, etc. I try to get away from giving them the answers."

Next, participants were asked how their team members would describe students' learning. Of the 29 respondents, almost half (13) felt their team members would say student learning was positive or average. One commented, "I think they would say that our students are learning, but they're interested in enhancing learning more." Another 8 felt team members would say that learning differs by students, according to their individual abilities. As 1 respondent noted, "They would say that our kids are learning just like average American kids, some high, some low." Two participants felt their team members would say students were not reaching their potential, and 6 others said it was too early to determine yet.

For the fourth question, the evaluator asked participants how they would judge their school team at collaborating on professional-type issues. Almost half (12) of the participants judged their team's collaboration to be excellent or very good. For example, "We have a very professional-type team; excellent" and "Very positive, very professional, very intense, self-motivated; very progressive." Seven judged the collaboration to be good; i.e., "Good, everybody expresses their point and we reach agreement" and "Our team does a good job at collaborating on professional issues." Four other participants felt their teams were learning to collaborate: "Working at it, that's why we're here" and "We became a team to come here to learn ITI." One respondent noted the school team collaborated "with difficulty," while another commented "Rather early to tell on this, it's still overwhelming to us." Three others said it was too early to determine yet.

Last, the evaluator asked participants to rate their school faculty on readiness and willingness to accept change. Almost half of the respondents (13) noted it would be difficult, citing reasons such as "old" faculties, constantly hearing about new things, lack of unity, negative attitudes, skepticism, and resistance. Seven participants felt about half of their faculty would accept changes, with several noting that their schools had implemented so many changes lately that it may impact teachers' willingness to try anything else. Alternatively, 7 other participants felt the majority of their faculty were ready and willing to implement school change. Finally, 2 others said it was too early to determine yet.

**Role-Alike Caucus Sheet Reflective Activity**

For this activity, participants were to assemble in role-alike groups. The six role groups included administration, English/language arts, mathematics, science, social studies, and other (including family/consumer science, foreign language, marketing, music, and vocational education). For each group, participants were to select a facilitator, a timekeeper, and a recorder, and were to answer two questions.

The first question was, "What to you seems most promising by way of new approaches to teaching and learning?" The administration group's responses included programs that reach all learners and help students become active learners; learning styles and strategies; and the emphasis on skills in computers, communication, reading, and higher-level thinking. The English group mentioned electronic media, learning styles, block scheduling, group learning, curriculum, portfolios, and outcome-based education. The math group responded with school to work, applied subjects, and questioning techniques. The science group mentioned utilizing technology and school to work, showing students how school relates to the real world, and students' higher interest level. The social studies group's responses included transfer of learning to students, shared responsibilities, problem solving and communication skills, and cooperative learning. Finally, the other group mentioned technology, increased student interest and teacher knowledge, higher student success rates, hands-on learning, and learning to apply to daily life. Looking at responses across roles, five of the groups mentioned learning styles and strategies (including higher-level thinking, group learning, questioning techniques, cooperative learning, and hands-on learning), and four groups mentioned utilizing new technology. Three groups mentioned increasing student interest and participation, and two groups each mentioned applying learning to daily life/real world, utilizing school to work, and improving communication skills.

The second question was, "What special opportunities and challenges are associated with collaborating with others in designing interdisciplinary studies?" The administration group mentioned getting teachers to become risk takers, giving the time/resources/opportunities to risk takers, setting higher expectations for teachers and self, and actually teaching the students (not just the subject matter). The English group's responses included specific challenges (egos, fear, reluctance to change, and scheduling) and opportunities (shared support/ideas, teacher development, and reduced burnout). The math group mentioned time to collaborate, prioritizing

educational changes, support of vocational technical program, sharing prior integration experiences, and learning connections between classroom and life skills. The science group mentioned one opportunity (tying things together for students) and several challenges (teachers isolated in "discipline of student," scheduling/school structure, meeting T-CAP scores and college requirements, and "catch-22" situations). The social studies group's responses included willingness to compromise, team challenge to work together, and changing from an independent to an interdependent teacher. Finally, the other group mentioned opportunities of pooling resources, exchanging ideas, meeting other teachers and people out of your particular area, and seeing a greater success rate; and challenges of coming out of the "comfort zone," overcoming administrative attitudes, finding time for meetings, budgeting issues, and educating parents and the community. Looking at responses across groups, several issues seem to be prevalent. Similar challenges included time restraints, scheduling and structure issues, and persuading staff to become risk takers. Similar opportunities included collaboration, networking, and sharing resources and ideas.

**Team Reflection Logs**

In this activity, the six teams were asked to complete a Team Reflection Log at the close of each day's sessions (except for the last day). The items for each log were tailored to the content of the day's events. The sixth team, composed of interns, only completed a log for Sunday, which is not included in the following analysis.

**Sunday.** This daily log asked each team for the following information: Which of today's activities helped set the stage for work at this Institute? What can we do/provide/change to better meet your team needs and interests? What are your team's "next steps" in designing interdisciplinary teamed instruction? Four adjectives to describe our feelings. Other things we'd like to say.

Team A (school names deleted to provide anonymity) mentioned "team strengths through hands" when responding to which of the activities helped set the stage for work at the Institute. Team B indicated "roles for table talk, hands poster, and the journal." Team C also mentioned "hands" and "meeting with others in discipline areas." Team D again mentioned "the hands activity," as well as "spelling out tasks to be done" and "organized presentations." Finally, Team E also mentioned the "hands activity" and "caucus (concerning subject areas)." Clearly, the "hands" activity seemed to be the definitive activity to begin the Institute.

When asked what could be done to better meet team needs and interests, Team A indicated a need for explanations on the "Role Play Intg. Lesson," while Team B simply responded with "more time for transition." Team C said to "provide practical ideas and suggestions to implement integrated curriculum as easily and smoothly as possible." Team D had one comment ("too much, too fast, to think about") and two suggestions: "more sharing time in group" and "need answers to questions—how do we make it work?" Finally, Team E asked for "two copies of each handout (one for recorder, one for facilitator)."

The third item asked teams what their "next steps" were in designing interdisciplinary teamed instruction. Team A responded, "learning how to design and plan a lesson," while Team B said "active participation by all team members, more comfortable atmosphere, we feel this question is vague." Team C said "network with other teams, gathering information, gain a vision of where we want to go." Team D replied, "We don't know yet—we need to see models of successful ITI." And, Team E mentioned "implement strategies you teach us, find out pilot area for integration for our school."

In providing adjectives to describe their feelings, Team A listed "tired, dubious, apprehensive, major concern"; Team B, "negative, dedicated, open to ideas, flexible"; Team C, "tired, expectant, excited, anticipation"; Team D, "confused, frustrated, overwhelmed, curious"; and Team E, "expectant, hopeful, concerned, overwhelmed." Obviously, these five teams were similar in their feelings of being a little wary of what was taking place, while at the same time trying to stay open-minded and positive about the outcome.

Finally, when asked for other comments, Team A replied, "We are not negative. We are realistic about problems we have no control over to implement the program." Team B asked for "more literal questions, more clarification." Team C said, "This session was a great kick-off. It was well-paced. The leaders are easy to relate to/approach." Similarly, Team D replied, "You are very organized. You seem very knowledge[able]." Team E did not provide comments for this item.

**Monday.** Items for Monday included: Which of today's activities best helped you prepare for your team role and responsibilities at the Institute? What can we do/provide/change to better meet your team needs and interests? What are your team's "next steps" in developing your capacity for teamwork? Four verbs to capture our feelings. Other things we'd like to say.

Team A indicated two activities that best helped them prepare for their team role and responsibilities: "Six hats helped us to see what type of thinkers we were. Technology (car building) each team member faced their own weaknesses." Teams B, D, and E responded similarly with the hats and mousetrap-powered vehicle activities. Team E added, "The hats helped to show us what talents the group had; however, we did not use that info before making a car—the car was a disaster." Team C also listed the mousetrap activity, as well as "Tools to Support Teamwork."

When asked what could be done to better meet team needs and interests, Team A replied, "Meet with our team to discuss our direction." Team B suggested, "Check for understanding after directions are given. Clarify directions/questions." Team C responded, "Keep on keeping on—you're great. Have the high schools share their implementation w/ us for our 9th grade possibilities." Team D replied, "Realign agenda—possibly work until 5 and free up time after supper for team planning, thinking, reflection, reading, and interchange with other teams." And, Team E said, "Enough R&R to go and explore Radford. Maybe rearrange schedule—cut out p.m. breaks, go longer and get off at 4 or 5."

In identifying their next steps in developing teamwork capacity, Team A said, "We are implementing our Table Top Rules to be more successful in becoming an expert team." Team B indicated a need to "clarify roles/willingness to assume roles." Team C said they would "lay the groundwork for an 8th grade team," while Team D mentioned "collaborating on possible projects for here and at school." And, Team E replied, "coming up w/ ideas of units we can use to integrate curriculum."

When asked to list four verbs that captured their feelings, Team A listed "agitated, excited, questioning, vocal"; Team B, "produce, create, develop, talk/listen"; Team C, "doing, thinking, reevaluating, reflecting"; Team D, "better, tired, processing, evaluating"; and Team E, "planning, questioning, brainstorming, collaborating, wondering, pondering." Based on these descriptors, it seems that all teams were actively involved in collaborative development activities.

Finally, when asked for other comments, Team A said, "Thank God for Mr. Merrill!!! How does all of this come together?" Team B replied, "Joshua was enlightening/thought-provoking. Time is still too short sometimes. Great organization on your part!!!" Team C simply replied, "Thanks! Good day!" Team D said, "Please consider our request for after supper work." And, Team E replied, "This is frustrating. Beginning to see glimmer of what is possible. Beginning to hope for attitude changes on part of our faculty."

**Tuesday.** The items included: Which of today's activities best prepared you to make decisions about interdisciplinary teamed instruction? What can we do/provide/change to better meet your team needs and interests? What are your team's "next steps" in terms of designing an interdisciplinary course or unit? Four nouns that sum up our feelings. Other things we have to say.

Team A provided three activities that best prepared them to make decisions about ITI: "Jigsaw ITI examples, reviewing the examples, reviewing fertile themes for integrated learning." Team B also mentioned the jigsaw, as well as the "Red, Blue, Green, and Yellow" article. Team C responded similarly with "reading 'Selecting Fertile Themes,' reviewing and rating ITI examples, designing our individual unit." Team D replied, "mtn climbing.—4 corners activity," while Team E also mentioned the "fertile themes" article. Overall, this article seemed valued by most teams.

When asked what was needed to better meet team needs and interests, Team A replied, "We appreciated individual help today." Team C said to "continue similar activities/provisions. Team D responded, "Thanks for rearranging the schedule to consider our requests." And, Team E indicated, "You are all doing great—you are here when we need you—and you gave us an R&R!!"

In describing next steps for designing an interdisciplinary course or unit, Team A indicated "designing activities and curriculum"; Team B, "children input"; Team C, "focusing on specific activities for our unit"; Team D, "selecting the disciplines to include in our unit"; and Team E, "We are going to refine and polish our unit (and probably change it) and add activities."

In listing four nouns that summed up team feelings, Team A said "understanding, guidelines, direction, success"; Team B, "team, enthusiasm, energy, thoughts"; Team C, "thinkers, workers, creators, planners"; Team D, "themes, questions, concepts, lens, energy"; and Team E, "jubilation, accomplishment, work, taskmaster." Again, all teams seemed to be "in gear" as the creative process continued.

When asked for other comments, Teams A and D said they were "beginning to see the light," while Team B said "thanks for the evening off." Team C noted "we see progress today" and Team E replied, "You, by the way you run the workshop into 90 minute blocks of time, have done a wonderful job of modeling how to efficiently use the time on block scheduling. You have changed activities often enough to keep our interest."

**Wednesday.** These items included: Which of today's activities best helped you define active learning and authentic tasks? What can we do/provide/change to better meet your team needs and interests? What are your team's "next steps" in terms of designing challenging and engaging tasks? Four words to describe our feelings today. Other things we have to say.

When asked which activities best helped them define active learning and authentic tasks, Teams A and E mentioned the four concurrent sessions of "Writing to Learn, Community Based Learning, Cooperative Learning, and Multiple Intelligences." Team B said the "Mrs. Tolliver" video, and Team C said, "The concurrent sessions were well presented and beneficial. Mrs. Tolliver's class video was inspiring and 'spotlight on a right' all encompassing and thought provoking." Similarly, Team D replied, "The videos helped us to integrate the activities of the conference. The breakouts helped with planning activities."

When asked what was needed to better meet team needs and interests, Team B asked for "consistent guidelines" and Team C noted that "just a few more minutes was needed on the concurrent session." Team D replied, "Need time (10-20 minutes) to jigsaw report on breakout activities—immediately after breakouts—while info is fresh and we are still excited!" And, Team E said that "our needs are being met."

In identifying next steps for designing challenging and engaging tasks, Team A mentioned "reflect on theme—revise and refine as needed." Team B listed "student input, group planning," while Team C said "fine tune our project." Team D noted a need to "review closely today's plans to develop the tasks" and Team E said to "design staff development in int. curriculum for faculty."

In providing words that described their feelings, Team A said "relieved, tired, saturated, busy"; Team B, "tired, confused, informed, grateful"; Team C, "accomplishment, busy!!!, taxing, progress"; Team D, "touche, energetic, progressing, goals are clearer"; and Team E, "relieved, educated, productive, exhausted." While team energy seemed to be waning, each team was close to a final product.

Other comments included Team A's "Thanks for the help." Team B said, "We are concerned about the exhibition on Friday: (a) time, (b) quality, (c) depth, (d) format." Team C succinctly noted, "We are family." Team D said, "We appreciated the videos. I can almost feel that ribbon snap across my chest as I cross the finish line!" And, Team E summed up with, "Thank you for listening to us. And for being positive model teachers."

**Thursday.** These items included: Which of today's activities best helped you connect learning and assessment? What can we do/provide/change to better meet your team needs and interests? What are your team's "next steps" in terms of building assessment into instruction rather than adding it on? Our rubric for today's program is. Other things we'd like to say.

When asked which activities best helped the team connect learning and assessment, Team A replied, "creating our own rubrics." Team B said, "hands-on practice, thanks!" Team C noted the "rubric construction" and Team D said "making the rubric/assessment." Team E replied, "Practicing magic squares and making a rubric on it. The original rubrics with combined groups gave our team a different and enlightened perspective on assessment." Obviously, the rubric activities helped all teams connect the concept of learning with assessment.

In responding to the item asking what could be done to better meet team needs and interests, Team A felt the "topic was thoroughly covered—very helpful." Team B excitedly noted, "You've done it!! Great stimulation and activities!" Team C asked for "copies [of] units, list names, . . . Isosceles song." Team D replied, "We (adults) need to be reminded to put our 'ego' in check when dealing with teams and diverse opinions." And, Team E, commenting on meeting facilities, said, "In the future have copy machine in room and use permanent overhead markers—others smear."

In describing next steps for building assessment into instruction (rather than adding it on), Team A said, "We want to plan to use more authentic assessment rubrics and less traditional methods. Those who do use authentic assessment want to refine rubric making techniques." Team B noted, "After administering the initial questionnaire to students in Sept., we plan to have students generate guidelines for the interviews of family members." Team C said they would "continue work at home with faculty and other team members [and] try to integrate unit with other teachers and integrate the assessment." Team D's next steps were to "reevaluate task, adjust task, agree." And, Team E said, "Have students develop their own rubrics and use several alternative assessments (w/ rubrics) in each grading period."

When describing their rubric, Team A said, "rad, so-so, boring"; Team B said "we expected energetic presentation and we got DYNAMIC!"; Team C rated their rubric an 8 on a 9-point scale; Team D gave themselves an "A"; and Team E drew a lit-up light bulb, with the phrase, "the light dawned." Although four of the teams seemed delighted with their final rubrics, Team A didn't seem to be quite as pleased.

In providing other comments, Team A said, "super-great session, finally coming together, one of the most useful sessions." Team B noted, "It was a fantastic week. We appreciate all your efforts." Team C replied, "We are thankful for your hard work!" and Team D simply said "Thanks!!" Finally, Team E jokingly replied, "Pray for us not being lynched by rest of faculty. Thanks, you've been great."

**Videotaped Presentations**

All six teams developed final presentations and presented them on the final morning of the Institute. These "culminating exhibitions" were to capture and convey three key concepts: (1) Reflect on your learnings and experiences at this Institute; (2) What key messages will you bring back to share with colleagues; and (3) How has your work together this week put a mark on how you view your role as teacher in the learning process? Teams could select one of the following themes for their presentation: TV news broadcast, TV sitcom, home page on the internet, TV commercial, TV/radio talk show, magazine, courtroom trial, game show, mystery theater, or broadway musical.

Each team's videotaped presentation was reviewed by evaluators and assessed using a "Holistic Rubric Based on Clustered Activities." This rubric included four levels:

1. Novice: Some of the team members cannot be heard or seen well. There are gaps or pauses in the flow of the performance. Technologies or props may be lacking or even distracting. The whole program may appear not organized or is too long or too short.

2. Apprentice: The message is mixed or missing, or participation is not balanced. Some elements may actually be done well, but this performance is distinguished by its unevenness.

3. Practitioner: The intended message reaches the audience. Everyone can be seen and heard. Props and related technologies enhance the message without intruding on or overshadowing it.

4. Expert: An exceptional performance. The story line and characters reflect a very high level of creativity, insight, or humor. The major messages developed at the week-long Institute are clearly conveyed.

The six teams' culminating exhibitions varied widely in their format, length, and quality, although they were uniformly entertaining and obviously fun for both presenters and the audience. In terms of the format for the team presentations, two were broadway musicals, one was a TV musical (because of the addition of an ITI commercial), one was a TV news broadcast, one was a TV shopping network, and one was a TV game show ("The ITI Feud"). The shortest presentation was just 2 minutes 5 seconds, while the longest was 13 minutes. All of the

presentations included some type of visual aid or prop such as handmade signs, pieces of a large puzzle, large maps, teaching aids, or overhead transparencies. The presentations varied in their "smoothness," probably reflecting more or less rehearsal time or lack of experience in acting and/or singing. However, the chosen format, timing, or quality appeared to not hinder the audience from enjoying some teams' presentations and joining in singing songs or repeating verses when requested.

Charged with conveying three key concepts in the presentation, the six teams selected a variety of concepts, but there was remarkable similarity with one concept. Specifically, the concept of multiple intelligences was included in five of the six team presentations, and it dominated the time for two of those teams. Most teams used different colored hats to reflect different intelligences; either real hats or those made of construction paper or drawn on overhead transparencies. Four concepts were mentioned or portrayed in at least two presentations: teamwork, interdisciplinary units, assessment/rubrics, and facilitation roles. Other concepts in the presentations included "table talk" rules, "hands of traits," transfer of learning, thinking of teaching and learning differently, and elements of a good teaching unit. The evaluators could not identify a third key concept in one team presentation, which was the lowest rated exhibition.

Of the six presentations, two were judged to be at the Expert level, three at the Practitioner level, and one at the Apprentice level. Overall, team members seemed to be interested in and knowledgeable of the content of the 1996 ITI Summer Institute.

## CONCLUSIONS

A number of conclusions can be drawn from the findings presented earlier. These conclusions are presented by type of data collection, followed by overall conclusions.

**Teacher Questionnaire.** We conclude that the 1996 ITI Summer Institute had some effect on the Self-Efficacy, Decision Making, Impact, and Autonomy in Scheduling subscales after a period of 1 year. For the Total Scale, the Institute seems to have had some effect, which was almost moderate after 1 year. The Institute had little effect on the Status and Professional Growth subscales after 1 year.

**School as Community Questionnaire.** We conclude that the 1996 ITI Summer Institute had a moderate effect on the Collaborative Activity subscale and some effect on the Total Score by the end of the Institute. The Institute had some effect on the Collaborative Activity and Collective Focus on Student Learning subscales after a period of 1 year. The Institute had little effect on the Shared Sense of Purpose and Reflective Dialogue subscales and the Total Score after 1 year. The Institute had no effect on the Deprivatized Practice subscale after 1 year.

**School Products and Services Questionnaire.** We conclude that the 1996 ITI Summer Institute had little effect on the Total Score after a period of 1 year.

**Control Questionnaire.** We conclude that the 1996 ITI Summer Institute teachers scored higher on the Self-Confidence subscale in comparison to the Autonomous Behavior subscale. And, when the subscales were combined, the teachers scored moderately high on the Total Score.

**Feedback Form.** We conclude that participants felt the 1996 ITI Summer Institute greatly met its intended outcomes. They found the Institute to be well planned, informative, motivational/inspirational, and worth the time and money invested. The most meaningful Institute activities for participants were team building, assessment rubrics, and multiple intelligences; major strengths were team building, information provided, and the organization/ implementation. The Institute positively changed participants' thinking, resulting in increased belief in and reinforcement of ITI principles, and heightened awareness of its potential uses. Furthermore, participants were eager to incorporate their new knowledge back in their respective schools via rubrics, multiple intelligences, cooperative learning, and team building.

**Role-Alike Caucus Activity.** We conclude that participants of the 1996 ITI Summer Institute felt the most promising new approaches to teaching and learning included technology and learning styles and strategies. These styles and strategies included higher-level thinking, questioning techniques, group learning, cooperative learning, and hands-on learning. We also conclude that collaborating to design interdisciplinary studies brings about opportunities to those involved including collaboration, networking, and sharing new resources and ideas with others.

And, conversely, this collaboration invokes challenges such as time restrictions, scheduling problems, and persuading others to become risk takers.

**Interviews.** We conclude that most participants of the 1996 ITI Summer Institute felt a great deal of freedom in deciding what and how curriculum is taught in their respective schools. Participants also advocated using strategies such as critical thinking and analysis skills, activities and projects, cooperative learning, and computer training to help students become independent learners. The majority of Institute participants described student learning in their respective schools as positive or average, with individual achievement levels differing by student. Most teams felt that their level of collaboration was good, if not excellent. About half of the participants felt their respective school faculties were ready and willing to implement school change. Another fourth felt that about half their faculties were ready at this point, but the remaining fourth felt implementation would be difficult at the present time.

**Team Reflection Logs.** We conclude that, as the 1996 ITI Summer Institute progressed, participants moved from learning and gathering information to clarifying roles and collaborating to designing activities to reviewing and revising and, finally, to integrating the unit. As a result, their emotions ranged widely from curiosity, apprehension, and anticipation at the beginning to enthusiasm and understanding midway through to exhausted, relieved, and productive at the conclusion of the Institute. The Institute served as a positive modeling experience for participants, and they felt a sense of accomplishment upon mastering assessment rubrics. Further, participants felt the most beneficial activities of the Institute included multiple intelligences, rubrics, the mousetrap, and jigsaw.

**Overall Conclusions.** We conclude, from the triangulation of the data garnered from the mixed-method approach, that the 1996 ITI Summer Institute had the greatest impact on participants in the following areas: collaboration, cooperative learning, assessment rubrics, multiple intelligences, and team building. Participants were overwhelmingly positive in their valuation of the Institute, which strengthened their belief in and commitment to ITI concepts and practices. Finally, after reviewing the outcomes of this comprehensive evaluation, we conclude that the quantitative instrumentation utilized may not have fully captured and documented institute effects.

## RECOMMENDATIONS

Several recommendations are offered, based upon findings and conclusions presented earlier.

We recommend that the program continue offering ITI summer institutes to interested educators. Suggested improvements for future institutes might include more explanatory content, more time for individual activities, and slight scheduling adjustments. Also, we recommend that the program continue supporting curriculum integration efforts by keeping in touch with participants and providing new resources when available. One approach for this communication and information provision that is already being implemented by ITI staff is the use of their electronic ITI listserv, which connects interested educators from around the world.

We recommend that the program continue evaluating such institutes, with both qualitative and quantitative methods. We do not feel the need, however, for such an intensive, comprehensive evaluation effort as that presented in this report. The extensive evaluative methodology did not seem to be efficacious, in that the amount of information gained did not seem to be worth the prodigious amount of time spent gathering and analyzing data. Further, the utility of the three quantitative instruments used in this evaluation is questionable, since these surveys did not specifically assess the concepts and constructs undergirding the ITI activities and philosophies. We recommend that staff locate and secure other relevant instrumentation for future endeavors. And, staff might even consider alternate ways of focusing evaluative efforts to better document ITI's ultimate impact on student outcomes. Staff might want to investigate in depth why some schools succeed in their ITI endeavors and report continuing implementation, while others apparently do not demonstrate similar success. One such approach might be site visits at selected ITI schools whose faculty have participated in previous summer institutes.

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# APPENDIXES

# Appendix A:

# Institute Agenda

# ITI Institute Agenda

**Sunday**

**Theme: Introductions**

(Introductions to AEL, the Institute and facilitators. Getting acquainted with our own team members, and meeting the other teams.)

| | |
|---|---|
| 3:00 p.m. - 5:00 p.m. | Registration and Check-in--Norwood Hall |
| 5:00 p.m. - 6:00 p.m. | Dinner--Dalton Hall |
| 6:00 p.m. - 8:30 p.m. | Welcome<br>Overview of Institute and Expectations<br>Introductions<br>Team Roles, Team Needs, Networking, Journaling<br>(Commonwealth Room, Heth Hall) |

**For the remainder of the week, all meals are in Dalton Hall and all working sessions are in Heth Hall.**

**Monday**

**Theme: Team Roles and Responsibilities**

| | |
|---|---|
| 7:30 a.m. - 8:30 a.m. | Administrator Breakfast |
| 8:30 a.m. - 10:15 a.m. | Developing Teams: Roles, Rules, Relationships, Results |
| 10:15 a.m. - 10:30 a.m. | Break |
| 10:30 a.m. - 12:00 a.m. | Tools to Support Teamwork<br>Concurrent Sessions:<br><br>Conflict Resolution (Cascades)<br>Tools for Testing Consensus (Claytor)<br>Group Roles and Functions (New River) |
| 12:00 p.m. - 1 p.m. | Lunch |
| 1:00 p.m. - 4:00 p.m. | Team Exploration and Debrief |
| 4:00 p.m. - 5:00 p.m. | R & R |
| 5:00 p.m. - 6:00 p.m. | Dinner |
| 6:00 p.m. - 7:30 p.m | Team Planning and Reflections |
| 7:30 p.m. - 8:30 p.m. | Ice Cream Social |

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Tuesday

**Theme: Integration Models and Processes**

Designing and developing powerful and meaningful learning activities in support of an integrated unit.

| | |
|---|---|
| 7:30 a.m. - 8:30 a.m. | Administrator Breakfast |
| 8:30 a.m. - 10:15 a.m. | Five Stages of Integration<br>Reviewing and Rating ITI Examples |
| 10:15 a.m. - 10:30 a.m. | Break |
| 10:30 a.m. - 12:00 a.m. | Discovering "Fertile" Themes |
| 12:00 p.m. - 1:00 p.m. | Lunch |
| 1:00 p.m. - 2:00 p.m. | Team Applications: Unit Design<br><br>Generating Learner Goals<br>Identifying Powerful Learning |
| 2:00 p.m. - 4:00 p.m. | Team Planning Time:<br>Beginning the Unit Development--<br>Selecting a Theme<br>Framing Essential Questions<br>Designing Powerful Learning Experiences |
| 4:00 p.m. - 5:00 p.m. | R & R |
| 5:00 p.m. - 6:00 p.m. | Dinner |
| 6:00 p.m. - 7:30 p.m. | Evening Session<br>Videos, Discussion, and Reflection |

**Wednesday**

**Theme: Building Activities That Link with Assessment**

A well designed activity IS an Assessment--linking learner activities with the culminating performance.

| | |
|---|---|
| 7:15 a.m. - 8:00 a.m. | Administrator Breakfast |
| 8:00 a.m. - 9:15 a.m. | Learning Principles and Authentic Tasks |
| 9:15 a.m. - 10: 30 a.m. | Concurrent sessions:<br><br>Cooperative Learning (Clayton)<br>Problem-Based Learning (New River<br>Multiple Intelligences (Cascades |

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| | |
|---|---|
| 10:30 a.m. - 10:45 a.m. | Break |
| 10:45 a.m. - 12:00 a.m. | Concurrent Sessions: |
| | Cooperative Tasks (Claytor)<br>Community-based Learning (New River)<br>Writing to Learn (Cascades) |
| 12:00 p.m. - 1:00 p.m. | Lunch |
| 1:00 p.m. - 2:00 p.m. | Structuring a Powerful Learning Experience |
| 2:00 p.m. - 4:00 p.m. | Team Planning: Incorporating Authentic Tasks into Your Unit |
| | Team Reflections |
| 4:00 p.m. - 6:30 p.m. | R & R |
| 6:30 p.m. - 8:30 p.m. | Institute Picnic on the Lawn |

**Thursday**

**Theme: Focusing on Performance**

| | |
|---|---|
| 7:30 a.m. - 8:30 a.m. | Administrator Breakfast |
| 8:30 a.m. - 12:00 p.m. | Understanding Alternative Assessment |
| 9:30 a.m. - 10:15 a.m. | Constructing Scoring Rubrics |
| 12:00 p.m. - 1:00 p.m. | Lunch |
| 1:00 p.m. - 4:00 p.m. | Team Planning Time:<br>Construct a Rubric to Assess Student Performance<br>Construct a Rubric to Assess Unit Performance<br>Team Reflection |
| 4:00 p.m. - 5:00 p.m. | R & R |
| 5:00 p.m. - 6:00 p.m. | Dinner |
| 6:00 p.m. (as needed) | Team Planning: Prepare Team Exhibition |

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Friday

**Theme: Culminating Performances**

| | |
|---|---|
| 7:30 a.m. - 8:30 a.m. | Administrator Breakfast: |
| 8:30 a.m. - 9:00 a.m. | Planning for Re-entry |
| 9:00 a.m. - 9:30 a.m. | Team Action Plans |
| 9:30 a.m. - 10:15 a.m. | Team Exhibitions |
| 10:15 a.m. - 10:30 a.m. | Break |
| 10:30 a.m. - 11:15 a.m. | Team Exhibitions (continued) |
| 11:15 a.m. - 12:00 p.m. | Presentation of Certificates |
| | Program Evaluation |

# Appendix B:

# Teacher Questionnaire

# Teacher Questionnaire

Last Four Social Security Numbers: ___ ___ ___ ___ Date: _____

**Directions:** This questionnaire concerns your perceptions of how you view your teaching role. There are no right or wrong responses. Please read **each numbered statement** carefully. Then respond by circling one of the responses on the scale of Strongly Disagree (SD) to Strongly Agree (SA). Please do not skip any statements.

| Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|---|---|---|---|---|
| SD | D | N | A | SA |

1. I am given the responsibility to monitor programs.
   SD D N A SA
2. I function in a professional environment.
   SD D N A SA
3. I believe that I have earned respect.
   SD D N A SA
4. I believe that I am helping kids become independent learners.
   SD D N A SA
5. I have control over daily schedules.
   SD D N A SA
6. I believe that I have the ability to get things done.
   SD D N A SA
7. I make decisions about the implementation of new programs in school.
   SD D N A SA
8. I am treated as a professional.
   SD D N A SA
9. I believe that I am very effective.
   SD D N A SA
10. I believe that I am empowering students.
    SD D N A SA
11. I am able to teach as I choose.
    SD D N A SA
12. I participate in staff development.
    SD D N A SA
13. I make decisions about the selection of other teachers for my school.
    SD D N A SA
14. I have the opportunity for professional growth.
    SD D N A SA
15. I have the respect of my colleagues.
    SD D N A SA
16. I feel that I am involved in an important program for children.
    SD D N A SA
17. I have the freedom to make decisions on what is taught.
    SD D N A SA
18. I believe that I am having an impact.
    SD D N A SA

19. I am involved in school budget decisions.

SD D N A SA

20. I work at a school where kids come first.

SD D N A SA

21. I have the support and respect of my colleagues.

SD D N A SA

22. I see students learn.

SD D N A SA

23. I make decisions about curriculum.

SD D N A SA

24. I am a decision maker.

SD D N A SA

25. I am given the opportunity to collaborate with other teachers.

SD D N A SA

26. I believe that I have the ability to get things done.

SD D N A SA

27. I have a strong knowledge base in the areas in which I teach.

SD D N A SA

28. I believe that I have the ability to grow by working daily with students.

SD D N A SA

29. I perceive that I have the opportunity to influence others.

SD D N A SA

30. I can determine my own schedule.

SD D N A SA

31. I have the opportunity to collaborate with other teachers in my school.

SD D N A SA

32. I perceive that I am making a difference.

SD D N A SA

33. Principals, other teachers, and school personnel solicit my advice.

SD D N A SA

34. I believe that I am good at what I do.

SD D N A SA

35. I can plan my own schedule.

SD D N A SA

36. I perceived that I am having an impact on other teachers and students.

SD D N A SA

37. My advice is solicited by others.

SD D N A SA

38. I have an opportunity to teach other teachers about innovative ideas.

SD D N A SA

39. What grade(s) do you teach?

_____

40. What subject(s) do you teach?_____

41. Counting this year, how many years have you taught in any school?_____

42. Do you teach full time or part time? (mark one)

_____Full Time _____Part Time

43. Counting this year, how many years have you taught in this school? _____

44. Check the *one category* that describes how many degrees and credits you have now.

____Bachelors ____Masters

____Bachelors +15 ____Masters +15

____Bachelors +30 ____Masters +30

____Bachelors +45 ____Masters +45

____Bachelors +60 ____Masters +60

____Education Specialists Degree

____Doctors Degree

____Other (Explain)_____

_____

45. Check one: ____Female ____Male

46. Your age is ____ years.

# Appendix C:

# School as Community Questionnaire

# School as Community Questionnaire

Last Four Social Security Numbers: ___ ___ ___ ___ Date: _____

**Directions**: This questionnaire concerns your perceptions of how much your school is a community. There are no right or wrong responses. Please read each numbered statement carefully. Then respond by circling one of the response options on the scale of Strongly Disagree (SD) to Strongly Agree (SA). Please respond in terms of this school, its staff, and students.

| Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|---|---|---|---|---|
| SD | D | N | A | SA |

1. Most of my colleagues share my beliefs and values about what the central mission of the school should be.

   SD D N A SA

2. Goals and priorities for the school are clear.

   SD D N A SA

3. In this school, the teachers and the administration are in close agreement on school discipline policy.

   SD D N A SA

4. Since the beginning of the current school year, I have received many useful suggestions for curriculum materials from colleagues in my department.

   SD D N A SA

5. Since the beginning of the current school year, I have received many useful suggestions for teaching techniques or student activities from colleagues in my department.

   SD D N A SA

6. There is a great deal of cooperative effort among staff members.

   SD D N A SA

7. I make a conscious effort to coordinate the content of my courses with other teachers.

   SD D N A SA

8. In a typical planning period with other teachers, the group decides common themes and suggests related materials and activities to guide instruction.

   SD D N A SA

9. Since the beginning of the school year, I have met with other teachers often regarding lesson planning, curriculum development, guidance and counseling, evaluation of programs, or other collaborative work related to instruction.

   SD D N A SA

10. Higher level skills (reasoning, problem solving, critical, and creative thinking) are important student goals of my teaching.

    SD D N A SA

11. Teachers focus on what and how well students are learning rather than on how they are teaching.

    SD D N A SA

12. Teachers exhibit a reasonably focused commitment to authentic curriculum and instruction.

    SD D N A SA

13. A focused school vision for student learning is shared by most staff in the school.

    SD D N A SA

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14. Two or more teaching colleagues regularly observe my students' academic performance, or review their grades or test scores.

SD D N A SA

15. Except for monitoring student teacher or substitute teachers, I have often visited another teacher's classroom to observe and discuss their teaching since the beginning of the current school year.

SD D N A SA

16. Since the beginning of the current school year, I have received meaningful feedback on my performance from my supervisors or peers.

SD D N A SA

17. In a typical planning period with other teachers, the group discusses problems of specific students and arranges appropriate help.

SD D N A SA

18. In a typical planning period with other teachers, the group discusses specific teaching practices and behaviors of team members.

SD D N A SA

19. In formal and informal meetings of teachers, the group discusses the goals of the school.

SD D N A SA

20. In formal and informal meetings of teachers, the group discusses the teaching profession.

SD D N A SA

21. In formal and informal meetings of teachers, the group discusses how students learn.

SD D N A SA

22. In formal and informal meetings of teachers, the group discusses the evaluation of student learning.

SD D N A SA

23. What grade(s) do you teach?

_____

24. What subject(s) do you teach?

_____

_____

25. Counting this year, how many years have you taught in *any* school_____

26. Do you teach full time or part time? (Mark one)
_____Full Time _____Part Time

27. Counting this year, how many years have you taught in *this* school?_____

28. Check the *one category* that describes how many degrees and credits you have now.

____Bachelors ____Masters

____Bachelors +15 ____Masters +15

____Bachelors +30 ____Masters +30

____Bachelors +45 ____Masters +45

____Bachelors +60 ____Masters +60

____Education Specialists Degree

____Doctors Degree

____Other (Explain)_____

_____

29. Check one: ____Female ____Male

30. Your age is ____ years.

# Appendix D:

# School Products and Services Questionnaire

# School Products and Services Questionnaire

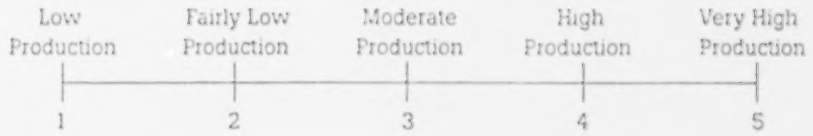
**Last Four** Social Security Numbers: __ __ __ __ Date: _____

**Directions:** These questions concern your perceptions of your school's overall effectiveness. There are no right or wrong answers. Every educator and staff member produces something during their work in the school. The following "products" and services are just a few of the things that result from schools' work:

| | | |
|---|---|---|
| Lesson Plans | Student Learning | Co-Curricular Activities |
| Curriculum | Community Projects | Parent Involvement |
| Art & Music Programs | Instruction | Clean Schools |

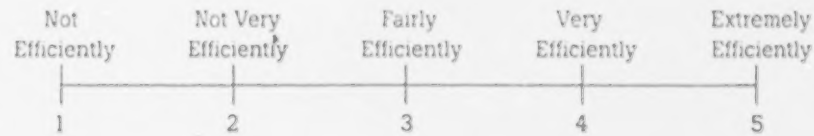
Please indicate your response to each of the first eight numbered questions by **circling a number** from 1 (low) to 5 (high) on the scale provided under the question or by **marking an "X"** on scale.

1. Of the various things produced by the people you know in your school, how much are they producing?

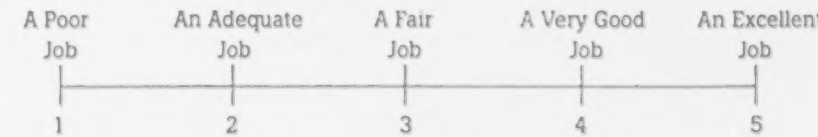



2. How good is the quality of the products or services produced by the people you know in your school?

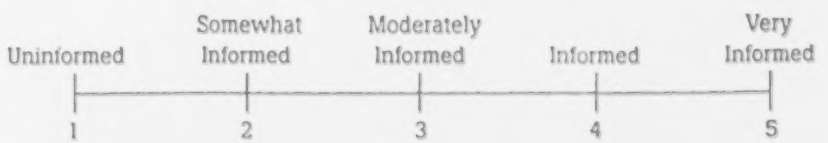
3. Do the people in your school get maximum output from the available resource (money, people, equipment, etc.)? That is, how efficiently do they do their work?




4. How good a job is done by the people in your school in anticipating problems and preventing them from occurring or minimizing their effects?




5. How informed are the people in your school about innovations that could affect the way they do their work?



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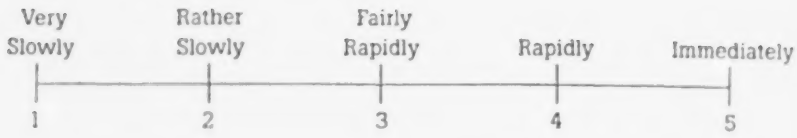
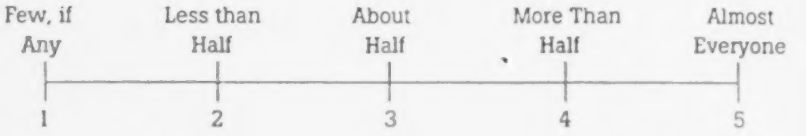
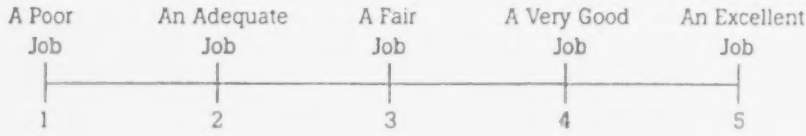
6. When changes are made in methods, routines, or equipment, how quickly do the people in vour school accept and adjust to the changes?




7. How many of the people in your school readily accept and adjust to the changes?




8. How good a job do the people in your school do in coping with emergencies and disruptions?




9. What is your role in the school? (check only one)

____Principal/Asst. Principal
____Counselor/Psychiatrist
____Classroom Teacher
____Teacher's Aide
____Itinerant Teacher (not at Bldg. full time)
____Title I Teacher
____School Staff (secretary, custodian, cook)
____Other (Explain: _____
_____)

10. Do you teach full time or part time? (Mark one)

_____Full Time _____Part Time

11. Counting this year, how many years have you taught in *this* school?

_____ years

12. Check the *one category* that describes how many degrees and credits you have now.

____Bachelors
____Masters
____Bachelors +15
____Masters +15
____Bachelors +30
____Masters +30
____Bachelors +45
____Masters +45
____Bachelors +60
____Masters +60
____Education Specialists Degree
____Doctors Degree
____Other (Explain)_____
_____

13. Check one:

____Female ____Male

14. Your age is

_____ years.

# Appendix E:

# Control Questionnaire

# CONTROL QUESTIONNAIRE

Date: _____

For continuity in processing these data, please write in the last four digits of your Social Security number:

___ ___ ___ ___

**Instructions**: This is not a test--there are no right or wrong responses. Please read each numbered statement carefully. Where there is a blank provided ( _____ ), decide what your normal or usual attitude, feeling, or behavior would be from these choices:

| A | B | C | D | U |
|---|---|---|---|---|
| **Rarely** | **Occasionally** | **Sometimes** | **Frequently** | **Usually** |
| (less than 10% of the time) | (about 30% of the time) | (about half of the time) | (about 70% of the time) | (more than 90% of the time) |

Of course, there are unsure situations in which this would not be the case, but think of what you would do or feel in **most normal situations**.

Write the **letter** that describe your usual attitude or behavior in the blank space provided for each statement. Please do not skip any statements in the list.

1. When faced with a problem, I _____ try to forget it.
2. I _____ need frequent encouragement from others for me to keep working at a difficult task.
3. I _____ like jobs where I can make decisions and be responsible for my own work.
4. I _____ change my opinion when someone I admire disagrees with me.
5. If I want something, I _____ work hard to get it.
6. I _____ prefer to learn the facts about something from someone else rather than have to dig them out for myself.
7. I will _____ accept jobs that require me to supervise others.
8. I _____ have a hard time saying "no" when someone tries to sell me something I don't want.
9. I _____ like to have a say in any decisions made by any group I'm in.
10. I _____ consider the different sides of an issue before making any decisions.
11. What other people think __ _____ has a great influence on my behavior.
12. Whenever something good happens to me, I _____ feel it is because I've earned it.
13. I _____ enjoy being in a position of leadership.
14. I _____ need someone else to praise my work before I am satisfied with what I've done.



**(Please turn this sheet over and continue)**

**Instructions**: This is not a test--there are no right or wrong responses. Please read each numbered statement carefully. Where there is a blank provided ( _____ ), decide what your normal or usual attitude, feeling, or behavior would be from these choices:

| A | B | C | D | U |
|---|---|---|---|---|
| **Rarely** (less than 10% of the time) | **Occasionally** (about 30% of the time) | **Sometimes** (about half of the time) | **Frequently** (about 70% of the time) | **Usually** (more than 90% of the time) |

Of course, there are unsure situations in which this would not be the case, but think of what you would do or feel in **most normal situations**.

Write the **letter** that describe your usual attitude or behavior in the blank space provided for each statement. Please do not skip any statements in the list.

15. I am _____ sure enough of my opinion to try and influence others.

16. When something is going to affect me, I _____ learn as much about it as I can do.

17. I _____ decide to do things on the spur of the moment.

18. For me, knowing I've done something well is _____ more important than being praised by someone else.

19. I _____ let other peoples' demands keep me from doing things I want to do.

20. I _____ stick to my opinions when someone disagrees with me.

21. I _____ do what I feel like doing not what other people think I ought to do.

22. I _____ get discouraged when doing something that takes a long time to achieve results.

23. When part of a group, I _____ prefer to let other people make all the decisions.

24. When I have a problem, I _____ follow the advice of friends or relatives.

25. I _____ enjoy trying to do difficult tasks more than I enjoy trying to do easy tasks.

26. I _____ prefer situations where I can depend on someone else's ability rather than just my own.

27. Having someone important tell me I did a good job is _____ more important to me than feeling I've done a good job.

28. When I'm involved in something, I _____ try to find out all I can about what is going on even when someone else is in charge.

# Appendix F:

# Feedback Form

**Feedback on Dissolving the Boundaries Summer Institute**

Name: (optional) _____ Date: _____

Position: _____

PLEASE RESPOND TO ALL OF THE ITEMS ON THIS FORM

For the following items please circle the number that best indicates the extent to which this institute:

| | Not at all | | | | Very much |
|---|---|---|---|---|---|
| 1. Had clear outcomes | 1 | 2 | 3 | 4 | 5 |
| 2. Promoted team building | 1 | 2 | 3 | 4 | 5 |
| 3. Caused me to reflect on my practices | 1 | 2 | 3 | 4 | 5 |
| 4. Caused me to examine some of my attitudes | 1 | 2 | 3 | 4 | 5 |
| 5. Facilitated development of new skills | 1 | 2 | 3 | 4 | 5 |
| 6. Was relevant to my needs | 1 | 2 | 3 | 4 | 5 |
| 7. Was conducted in a positive manner | 1 | 2 | 3 | 4 | 5 |
| 8. Had activities that were well sequenced | 1 | 2 | 3 | 4 | 5 |
| 9. Had activities that reinforced content | 1 | 2 | 3 | 4 | 5 |
| 10. Included appropriate examples | 1 | 2 | 3 | 4 | 5 |
| 11. Was conducted by competent trainers | 1 | 2 | 3 | 4 | 5 |
| 12. Was conducted in a professional manner | 1 | 2 | 3 | 4 | 5 |
| 13. Had meaningful involvement of participants | 1 | 2 | 3 | 4 | 5 |
| 14. Has stimulated me to want to use the concepts skills, and materials in my position | 1 | 2 | 3 | 4 | 5 |
| 15. Provided materials/ideas that will be useful to me in the future | 1 | 2 | 3 | 4 | 5 |

Please see other side of page for open-ended items and comments.



CONTINUED ☞

16. How would you describe your institute experience to others?

17. What new ideas, strategies, activities, resources were most meaningful for you?

18. What do you consider the major strengths of the summer institute?

19. What recommendations, if any, could you make for future institutes?

20. How has the institute changed the way you think about IT?

21. How will you use what you have learned in your school next year?

22. In what ways can AEL continue to support your efforts with curriculum integration?

23. Other comments?

# Appendix G:

# Interview Questions

**INTERDISCIPLINARY TEAMED INSTRUCTION (ITI) PROJECT**

Summer 1996 ITI Training Institute

**Participant Interview Questions**

Last four S. S. Digits: ___ ___ ___ ___ ITI Team Code: ___ ___

1. How much decision-making authority do you have over *what* is taught and *how* it is taught?

2. Describe ways in which you believe you are helping students become independent learners?

3. How would your team members describe how well students are learning?

4. How would you judge and explain your school team to be at collaborating on professional-type issues?

5. How would you rate your school faculty on their readiness and willingness to accept changes?

# Appendix H:

# Role-Alike Caucus Sheet

# Role-Alike Caucus Sheet

**Instructions:**

1. Assemble in your role-alike groups near the sign appropriate for your role group.
2. Have everyone introduce themselves by name and school/district/organization.
3. Select a facilitator to ask the caucus questions and keep the discussion moving, a timekeeper to remind the group of the time remaining to complete the activity, and a recorder to capture the key ideas and phrases. Everybody should have an opportunity to speak. The questions are:

A. What to you seems most promising by way of new approaches to teaching and learning?

B. What special opportunities and challenges are associated with collaborating with others in designing interdisciplinary studies?

ROLE-ALIKE GROUP: _____

Names of participants:

_____

_____

_____

_____

_____

_____

A. What to you seems most promising by way of new approaches to teaching and learning?

_____

_____

_____

_____

_____

B. What special opportunities and challenges are associated with collaborating with others in designing interdisciplinary studies?

_____

_____

_____

_____

_____



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# Appendix I:

# Team Reflection Log

# Team Reflection

Sunday Team: _____

- Which of today's activities helped set the stage for work at this Institute? (List)

_____

_____

_____

_____

- What can we do/provide/change to better meet your team needs and interests? (List)

_____

_____

_____

_____

- What are your team's "next steps" in designing interdisciplinary teamed instruction?

_____

_____

_____

_____

Use back of page as needed

**Four adjectives to describe our feelings:**

**Other things we'd like to say:**



**School Strategies & Options**, P.O. Box 597, Lunenburg, MA 01462 (508) 582-4217

# Team Reflection

Monday Team: _____

- **Which of today's activities best helped you prepare for your team role and responsibliilites at the Institute? (List)**

_____

_____

_____

_____

- What can we do/provide/change to better meet your team needs and interests? (List)

_____

_____

_____

_____

- What are your team's "next steps" in developing your capacity for teamwork?

_____

_____

_____

_____

Use back of page as needed

**Four verbs to capture our feelings:**

**Other things we'd like to say:**

# Team Reflection

Tuesday Team: _____

- Which of today's activities best prepared you to make decisions about interdisciplinary teamed instruction? (List)

_____

_____

_____

_____

- What can we do/provide/change to better meet your team needs and interests? (List)

_____

_____

_____

_____

- What are your team's "next steps" in terms of designing an interdisciplinary course or unit?

_____

_____

_____

_____

Use back of page as needed

Four nouns that sum up our feelings:

Other things we'have to say:

# Team Reflection

Wednesday Team: _____

- Which of today's activities best helped you define active learning and authentic tasks? (List)

_____

_____

_____

_____

- What can we do/provide/change to better meet your team needs and interests? (List)

_____

_____

_____

_____

- What are your team's "next steps" in terms of designing challenging and engaging tasks?

_____

_____

_____

_____

Use back of page as needed

Four words to describe our feelings today:

Other things we'have to say:





[redacted]

# Team Reflection

Thursday Team: _____

- Which of today's activities best helped you connect learning and assessment? (List)

_____

_____

_____

_____

- What can we do/provide/change to better meet your team needs and interests? (List)

_____

_____

_____

_____

- What are your team's "next steps" in terms of building assessment into instruction rather than adding it on?

_____

_____

_____

_____

Use back of page as needed

**Our rubric for today's program is:**

**Other things we'd like to say:**

# Appendix J:

# Presentation Scoring Rubric

ITI INSTITUTE TEAM EXHIBITIONS

A Holistic Rubric Based on Clustered Attributes

Level 4 EXPERT - An exceptional performance. The story line and characters reflect a very high level of creativity, insight, or humor. The major messages developed at the week-long institute are clearly conveyed.

Level 3 PRACTITIONER - The intended message reaches the audience. Everyone can be seen and heard. Props and related technologies enhance the message without intruding on or overshadowing it.

Level 2 APPRENTICE - The message is mixed or missing, or participation is not balanced. Some elements may actually be done well, but this performance is distinguished by its unevenness.

Level 1 NOVICE - Some of the team members cannot be heard or seen well. There are gaps or pauses in the flow of the performance. Technologies or props may be lacking or even distracting. The whole program may appear not organized or is too long or too short.

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# Appendix K:

# Evaluation *Standards* Checklist

## Citation Form

*The Program Evaluation Standards* (1994, Sage) guided the development of this (check one):

____ request for evaluation plan/design/proposal
____ evaluation plan/design/proposal
____ evaluation contract
__XX__ evaluation report
____ other: _____

To interpret the information provided on this form, the reader needs to refer to the full text of the standards as they appear in Joint Committee on Standards for Educational Evaluation, *The Program Evaluation Standards* (1994), Thousand Oaks, CA, Sage.

The *Standards* were consulted and used as indicated in the table below (check as appropriate):

| Descriptor | | The Standard was deemed applicable and to the extent feasible was taken into account. | The Standard was deemed applicable but could not be taken into account. | The Standard was not deemed applicable. | Exception was taken to the Standard. |
|---|---|---|---|---|---|
| U1 | Stakeholder Identification | XXXX | | | |
| U2 | Evaluator Credibility | XXXX | | | |
| U3 | Information Scope and Selection | XXXX | | | |
| U4 | Values Identification | XXXX | | | |
| U5 | Report Clarity | XXXX | | | |
| U6 | Report Timeliness and Dissemination | | XXXX (Data analysis done on time, but report was not) | | |
| U7 | Evaluation Impact | XXXX | | | |
| F1 | Practical Procedures | XXXX | | | |
| F2 | Political Viability | XXXX | | | |
| F3 | Cost Effectiveness | XXXX | | | |
| P1 | Service Orientation | XXXX | | | |
| P2 | Formal Agreements | | | XXXX | |
| P3 | Rights of Human Subjects | XXXX | | | |
| P4 | Human Interactions | XXXX | | | |
| P5 | Complete and Fair Assessment | XXXX | | | |
| P6 | Disclosure of Findings | XXXX | | | |
| P7 | Conflict of Interest | XXXX | | | |
| P8 | Fiscal Responsibility | XXXX | | | |
| A1 | Program Documentation | XXXX | | | |
| A2 | Context Analysis | XXXX | | | |
| A3 | Described Purposes and Procedures | XXXX | | | |
| A4 | Defensible Information Sources | XXXX | | | |
| A5 | Valid Information | XXXX | | | |
| A6 | Reliable Information | XXXX | | | |
| A7 | Systematic Information | XXXX | | | |
| A8 | Analysis of Quantitative Information | XXXX | | | |
| A9 | Analysis of Qualitative Information | XXXX | | | |
| A10 | Justified Conclusions | XXXX | | | |
| A11 | Impartial Reporting | XXXX | | | |
| A12 | Metaevaluation | XXXX | | | |

Name Merrill L. Meehan (typed) Date: 12/98

(signature)

Position or Title: Senior R&E Specialist

Agency: Appalachia Educational Laboratory

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Relation to Document: Co- author

(e.g., author of document, evaluation team leader, external auditor, internal auditor)



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